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ECONOMIC REPORT of the GOVERNOR

1981

State of Michigan

WILLIAM G. MILLIKEN

Governor

Transmitted to the Michigan Legislature

March 1981

March, 1981

Ladies and Gentlemen of the Legislature:

It is my pleasure to submit for your consideration my 1981 *Economic Report*, the thirteenth such report to be submitted by my office. Although we have been experiencing serious economic difficulties for more than 18 months, there is reason to be optimistic about the last half of 1981, and 1982.

By some measures, 1980 was the worst year for the Michigan economy since the great depression, as inflation, high interest rates and increasing foreign competition in the automobile industry combined to severely depress economic activity.

Real Michigan personal income, the best measure of economic health in the state, fell 9.1 percent in 1980, the largest decline, by far, since the 1930s. Domestic automobile sales were only 6.6 million units, the lowest total since 1961. Automobile production in Michigan declined 38.7 percent, due, in part, to an increase in the import share of automobiles to 26.7 percent compared with 21 percent in 1979. The number of unemployed workers soared to an all-time high of 534,000 and the unemployment rate averaged 12.4 percent, just marginally below the 1975 recession level of 12.5 percent.

Although the worst is over, I expect the Michigan economy to remain weak in the first half of 1981. I am optimistic that there will be significant improvement in the second half of the year, paving the way for a relatively strong economic performance in 1982. My optimism is based on the expectation of a substantial federal tax cut, to be enacted by midyear, declining interest rates and some moderation in the rate of inflation. I am also confident that automobile sales will improve as consumer confidence returns and the domestic manufacturers increase the supply of small, fuel-efficient cars.

Michigan personal income is expected to increase 10.8 percent in 1981, but when adjusted for inflation, will decline 0.8 percent. Michigan employment will be flat in the first half of the year but will increase a modest 1.2 percent for all of 1981. The unemployment rate is forecast to average 12.7 percent, slightly above the 1980 level and a major cause for continuing concern. Automobile sales are expected to increase 5.6 percent to 9.5 million units and Michigan motor vehicle production will rise 25.1 percent, as the import share drops slightly and Michigan's share of total U.S. production rises to 29.3 percent from the depressed 1980 level. Some progress will be made against inflation, as the Detroit CPI is expected to increase 11.7 percent in 1981, well below the 15.9 percent increase recorded in 1980. However, inflation will continue to be our major economic problem and a healthy,

sustained period of economic growth cannot be expected until greater progress is made in controlling inflation.

Although we have some reason for optimism for the immediate future, we cannot minimize our basic long-term economic problems. The Michigan economy will do well as long as the national economy remains strong, but we are still vulnerable to national economic downturns. This vulnerability tempers our optimism about the near-term prospects for renewed economic growth. We must, therefore, use some of the resources generated by economic growth in the next few years to strengthen our economic base and reduce our reliance on the automobile industry. On balance, the automobile industry has been good for Michigan and will continue to be our major source of employment, but we must attempt to attract businesses and new industries that are less susceptible to the periodic vagaries of the economy.

We made a giant stride toward improving our economic climate in 1980 by achieving the long-standing goal of reforming the workers' compensation and unemployment insurance systems. These reforms will ensure that deserving employees will receive higher benefits and that abuses are eliminated. This major achievement is evidence that state government can have an impact on the state's ability to keep and attract business. The elimination of this major impediment to economic expansion will allow Michigan to benefit from its many advantages such as an excellent work force, a motivated business community, an excellent quality of life, and a strong natural resource base.

Our recent successes will make the job of strengthening the Michigan economic base easier, but we must be realistic in our goals. Progress will not be made overnight and Michigan cannot have a strong economy unless the national economic problems of high inflation, low productivity, and insufficient capital investment are dealt with effectively.

My economic agenda for 1981 is only a beginning, but if these programs are enacted they will serve as the building blocks to a more prosperous, stable economy in the 1980s and beyond.

Briefly summarized below are some of the key recommendations in this blueprint for economic progress.

- Increased efforts to develop the tourist, agricultural, mining, water and rail transportation, and forestry sectors of the economy.

- Establishment of a special technology group and innovation development fund to promote location and expansion of high-technology firms in Michigan.

- Establishment of an Urban Land Assembly Fund to assist in assembling needed parcels of land for businesses wishing to locate or expand in central cities.

- Renewed efforts to increase Michigan's share of defense contracts and other federal funds for development projects.

- Continued efforts to reduce unnecessary business regulation and establishment of a "one-step" business application process.

- Establishment of an Industrial Training Program to assure business an available pool of skilled, trained workers for new jobs in Michigan.

In addition to these and other efforts to promote diversification of the Michigan economy, I will continue to work to improve the health of our automobile industry. We have recently completed efforts to help Chrysler Corporation and to attract Volkswagen to Michigan and are currently assisting General Motors in plant relocation projects in Orion Township, Detroit, and Hamtramck.

In the future, I will be working closely with other Governors in the Midwest in a series of collective efforts to encourage favorable action for the automobile industry at the federal level and to improve the economy of those states hit hardest by the national recession.

The level of business taxation is an area of concern to many businessmen. Although I am making no specific recommendations for changes in the business tax structure this year, I would like to briefly review the progress that has been made to reduce and more equitably distribute the tax burden.

The adoption of the single business tax in 1976 was unpopular with many businesses, but this major change in the tax structure has resulted in a more even distribution of the tax burden, has provided increased incentives for capital investment, and has stabilized state revenues, thereby reducing the need for periodic tax increases.

The enactment of the Plant Rehabilitation and Industrial Development Act, P.A. 198 of 1974, the Commercial Redevelopment Act, P.A. 255 of 1979, and the Economic Development Corporation Act, P.A. 388 of 1974, have provided financial assistance to business and allowed Michigan a better opportunity to compete for jobs with states that have business location advantages over Michigan. However, I believe we must be more creative in our use of these programs to ensure that our limited resources are used to maximum effect. I am, therefore, proposing that these programs be carefully reviewed and that recommendations be developed for further actions which could maximize the effect of these financial incentives.

Business will also be aided by the equalization by class legislation (P.A. 114 of 1979) that will take effect this year. The major benefit will be the correction of past inequities in the assessment of both business and residential properties and a more equitable distribution of the property tax burden between the various classes of property.

All these actions have helped substantially to reduce business taxes as a percent of total taxes. In the 10 years from 1967 to 1977 (the

latest year for which data are available), taxes with an initial impact on business declined from 35.9 percent to 23.6 percent of total state and local taxes; the U.S. average in 1977 was 30.6 percent, and in only three states was the percentage lower than in Michigan. In terms of property taxes, the share paid by business declined from 43.9 percent in 1967 to 36.2 percent in 1979. I believe these figures are dramatic evidence that Michigan has been very responsive to business concerns about the level of taxation and that we can no longer be classified as a high-tax state for business.

It is also a myth that the overall tax burden, including business and individuals, is high in Michigan, as we ranked 23rd among all the states in 1979 in terms of total state and local revenue as a percent of income, and this burden has not been increasing in recent years.

The $1.1 billion property tax relief program and $250 million cut in state and local spending that I announced in the *State of the State Message* will further reduce this burden and improve the balance of the tax structure.

All the actions we have taken in recent years and the proposals for future action outlined here are strong evidence of Michigan's commitment to improving the business climate and putting people back to work. However, we cannot let our increased emphasis on economic development overshadow our strong commitment to education, health, law enforcement, conservation, and the maintenance of a reasonable level of support for our less fortunate citizens. Michigan's reputation as a progressive, compassionate state with a high quality of life has been one of our major strengths in the past, and we must maintain this important advantage as we move to diversify our economy and to remove some of the impediments to economic growth.

As we strengthen our economy and improve the economic well-being of our citizens, we can also increase our commitment to progressive programs while keeping our pledge to the taxpayer to improve the efficiency and responsiveness of government. These may appear to be lofty goals, but with your cooperation and support I am confident they can be achieved.

I submit this *Economic Report* to you with the hope that it will provide the information needed to develop sound economic policies that will allow Michigan to achieve its full economic potential.

William G. Milliken

LETTER OF TRANSMITTAL

March, 1980

The Honorable William G. Milliken
Governor of Michigan
State Capitol
Lansing, Michigan

Dear Governor Milliken:

It is my pleasure to submit to you this 1981 *Economic Report.* This document highlights significant developments in the state and U.S. economies during 1980, and presents sector analyses and forecasts for 1981. Also included are a summary of relevant Public Acts of 1980, and significant economic events of 1980, as well as a number of historical data series.

During 1980, the Michigan economy suffered through one of the worst years since the Great Depression. This is most apparent in the decline in real personal income of 9.1 percent, the steepest fall since the early 1930s. Although real income growth will still be negative in 1981, we are now on the road to recovery. Efforts to diversify the Michigan economy will help provide an additional impetus for future economic growth.

The analyses and forecasts presented in this *Report* are the responsibility of the Office of Revenue and Tax Analysis of the Department of Management and Budget. This office also updates many of the data series presented in the *Report* in the bi-monthly publication, *Michigan Economic Review and Outlook.*

Valuable contributions to the *Report* were made by the Department of Agricultural Economics and the Graduate School of Business Administration at Michigan State University; by the Michigan Departments of Agriculture, Commerce, Labor, Natural Resources, and Transportation; Government Documents Center, Department of Education; and by the Office of the Budget and Word Processing Center, Michigan Department of Management and Budget.

Respectfully,

Gerald H. Miller

Gerald H. Miller, Director
Department of Management and Budget

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1981
ECONOMIC REPORT

SUMMARY OF 1980 ECONOMIC EVENTS

FIRST QUARTER

U.S. Grain Embargo. President Carter announced a sharp curtailment of U.S. grain sales to the Soviet Union and other measures in retaliation for the U.S.S.R. invasion of Afghanistan. The ban forbade the delivery of 17 million metric tons of grain for use in building up livestock herds.

Mortgage Rate Ceilings Lifted. Interest rate ceilings on home mortgage loans in 20 states were removed to stimulate housing markets. However, the resulting surge in interest rates still priced many buyers out of the market.

Chrysler Aid. President Carter signed into law a bill granting $1.5 billion in federal loan guarantees to financially troubled Chrysler Corporation.

Auto Imports Spark Union Fears. United Auto Workers President Douglas A. Fraser initiated a campaign to require Japanese auto makers to build cars in the U.S., reversing the auto union's traditional free-trade stance.

New Money Supply Definitions. The Federal Reserve Board introduced new definitions of the money supply to reflect more accurately the changing ways the public holds its funds. The measurements redefined the old standards and were broken down into five categories: M1-A, M1-B, M2, M3, and L.

Credit Controls. On March 14, 1980, President Carter unveiled a new five-point program to reduce the inflation rate, which had climbed to 18 percent in February. As part of his anti-inflation plan, he invoked the Credit Control Act, a measure that had been unused in the 11 years it had been on the books. To restrain spending by individuals, the Federal Reserve moved to curb the use of credit cards, check-overdraft plans, and other forms of consumer credit. The Board also placed restraints on banks and money-market mutual funds. Adoption of these stringent measures increased the severity of the economic decline in the second quarter.

Collapse of the Silver Market. Silver prices plummeted $5 to $10.80 an ounce on the New York Commodity Exchange on rumors that the Hunt brothers were not able to meet a $100 million margin call by

Bache Halsey Stuart on their huge holdings of silver futures contracts. As the silver market collapsed, the Hunts and their associates had to scramble to cover heavy losses, setting off a chain reaction and generating huge losses for speculators.

Banking Deregulation. President Carter signed the Depository Institutions Deregulation and Monetary Control Act of 1980, banking legislation called the most significant in 50 years. The law raised the ceiling on interest paid to small savers, authorized payment of interest on checking, increased to $100,000 from $40,000 the amount of bank savings insured by the federal government, and established a universal system of banking reserves.

SECOND QUARTER

Prime Rate Increase. The prime rate was raised to a record 20 percent, a move that hurt auto sales and the housing market.

Windfall Profits Tax. President Carter signed the Crude Oil Windfall Profit Tax Act of 1980. The legislation to complement the decontrol of oil prices was expected to bring the government more than $227 billion in revenues by 1990.

Auto Sales Slump. U.S. auto makers responded to the slide in domestic car sales by making production cuts and closing car assembly plants. By mid-April, over 240,000 American auto workers had been laid off, with about 170,000 on indefinite layoff status.

Chrysler Assistance. After intense negotiations, Chrysler Corporation obtained a $150 million loan from the State of Michigan's Common Cash Fund, averting a serious cash crisis.

Recession Deepened. Economic growth took a nosedive in the second quarter as real Gross National Product declined at a 10.3 percent annual rate, exceeding the record drop in the first quarter of 1975.

Credit Controls Relaxed. The Federal Reserve Board, responding to signs that the nation was in a recession, relaxed the restraints it had imposed on credit on March 14, 1980 to fight inflation.

Oil-Import Fee Blocked. Congress gave President Carter one of the worst setbacks of his presidency by overwhelmingly overriding his veto of a resolution blocking the oil-import fee. The Carter-proposed fee would have imposed a 10¢ per gallon duty at the gasoline pump to discourage energy consumption.

Chrysler Loans. Chrysler Corporation finally received the first government aid it had been seeking when the beleaguered auto maker,

with a crucial federal guarantee, borrowed $500 million by selling notes priced to provide investors a yield of 10.35 percent. Federal officials acknowledged, however, that the deepening recession hurt the company's chances of survival, even with the government aid.

THIRD QUARTER

Trucking Deregulation. President Carter signed the Motor Carrier Act of 1980, legislation substantially deregulating the American trucking industry.

Economic Recovery. The economy began to recover in the third quarter as real GNP increased 2.4 percent. The relaxation of credit controls and the temporary fall in interest rates partially revived the auto and housing markets and contributed to the recovery.

Persian Gulf Oil Cutoff. The simmering border dispute between Iran and Iraq flared into open warfare and forced the two states to cut off shipments of petroleum through the Persian Gulf. As a result, the price of oil surged to over $40 a barrel on the spot market, as world demand for oil ran about 1 million barrels a day in excess of supplies.

Summer Heat Wave. The final toll from the 1980 summer heat wave was 1,265 deaths and $20 billion in damage. Only three other summers in this century caused more heat-related fatalities in the U.S. Crops and livestock also suffered significant damage.

FOURTH QUARTER

J.P. Stevens Settlement. J.P. Stevens agreed to sign its first labor contracts with the Amalgamated Clothing and Textile Workers Union, heralding the end of one of the nation's longest and bitterest labor struggles. The big textile company resisted unionization despite the union's victory in representation elections, despite National Labor Relations Board rulings against the company for unfair labor practices, and despite a national boycott of Stevens products organized by the union. The new settlement is likely to have a broad impact and become a major impetus for unionization in the South.

No Auto-Import Curbs. Auto makers' requests for limits on imports of cars and light trucks were denied by the U.S. International Trade Commission, which ruled imports were not the major cause of the domestic industry's economic woes.

Economic Growth. The economy expanded at a healthy clip in the fourth quarter. Real GNP rose at a 5 percent annual rate. This was a stronger performance than most economists expected.

Wage and Price Guidelines Ended. The Council on Wage and Price Stability announced its decision not to issue new pay and price standards, effectively ending the voluntary anti-inflation guidelines program instituted in October, 1978. In the second year of the program, the guidelines again failed to reduce inflation below the previous year's level. The 1980 inflation rate of 13.5 percent topped last year's rate of 11.3 percent and inflation roared throughout the economy. The Administration never denied large government contracts to violators as it had threatened. Also the price rules did not apply to the items most responsible for the nation's recent inflation such as food, fuel, and housing costs. Thus, lack of enforcement contributed to the guidelines' failure.

Staggering Auto Industry Losses. New car sales plunged to 9 million units, down 15.7 percent from the 10.1 million sold in 1979 for the lowest total since 1975. As a result, the auto industry ended the year with staggering financial losses totaling $4.8 billion. Each of the four major car companies was in the red. General Motors suffered its first full-year loss since 1921, with a deficit of $763 million. Chrysler lost $1.8 billion, compared with a loss of $1.1 billion in 1979. Contributing to the decline in domestic sales were record sales of imported autos. Imports accounted for a record 26.7 percent of total auto sales.

Prime Rate Hiked. The prime rate was raised to a record 21 percent from 20 percent by major banks, intensifying concern that surging borrowing costs will throw the economy into another recession in 1981 and lead to several business failures. The prime rate hit 20 percent in the spring, fell back, but reached 21 percent again in mid-December.

SUMMARY OF 1981 ECONOMIC FORECAST

In 1981, the economy will recover modestly from the 1980 recession, with continued weakness in the first half of the year and stronger growth in the second half. A $30 billion federal tax reduction will help stimulate the recovery. Table 1 compares the estimated changes in key economic variables for 1981 with the changes recorded in 1976 when the economy rebounded very strongly from the 1974-75 recession. As shown, the 1981 recovery will be very modest compared with the 1976 turnaround, due in part to the fact that in 1976 the recovery occurred during the whole year, but in 1981 the recovery is expected to occur only in the latter half of the year.

The primary reason for the less than robust recovery in 1981 will be inflation. While inflation is expected to slow down from the 1980 level, it will remain above 11 percent, still an extremely high level. This high level of inflation will continue to hinder the growth of real income and will, therefore, inhibit the magnitude of the recovery.

TABLE 1
Selected U.S. and Michigan Economic Indicators: A Comparison with Previous Recovery
(Percent Change)

	1975	1976	1980	1981 Forecast
United States				
Real GNP	-1.3	5.9	-0.2	0.3
Auto Sales	-2.6	17.0	-15.5	5.6
Housing Starts	-13.3	32.5	-26.0	11.9
Unemployment Rate[1]	8.5	7.7	7.2	7.8
Michigan				
Real Personal Income	-1.8	6.8	-9.1	-0.8
Total Employment	-5.0	6.2	-5.0	1.2
Unemployment Rate[1]	12.5	9.4	12.4	12.7
Detroit CPI	7.5	5.4	15.9	11.7

[1]Actual rate, not percent change.

During 1981, real GNP is expected to increase only 0.3 percent and real Michigan personal income is forecast to decline 0.8 percent. U.S. auto sales are expected to improve 5.6 percent in 1981 and Michigan's production of motor vehicles is forecast to increase 25 percent. The U.S. unemployment rate is estimated to increase to 7.8 percent from 7.2 percent in 1980 and Michigan's jobless rate is forecast to rise to 12.7 percent from 12.4 percent in 1980. A summary of the key economic variables for 1981 is presented in Table 2.

TABLE 2
Economic Forecast Summary

	1980	1981 Forecast	Percent Change
United States			
Real GNP (Billions of 1972 Dollars)	$1,480.80	$1,491.70	0.7
Total Auto Sales (Millions)	9.00	9.50	5.6
Import Share (Percent)	26.70	25.40	-
Motor Vehicle Production (Millions)	8.00	9.20	15.0
Housing Starts (Millions)	1.29	1.41	9.3
Unemployment Rate(Percent)	7.10	7.80	8.3
Michigan			
Real Personal Income (Billions of 1967 Dollars)	$ 36.00	$ 35.70	-0.8
Motor Vehicle Production (Millions)	2.16	2.70	25.0
Total Employment (Thousands)	3,781.00	3,827.00	1.2
Unemployment Rate(Percent)	12.40	12.70	-
Detroit CPI (1967=100)	253.50	283.20	11.7

SUMMARY OF NATIONAL ECONOMIC POLICY

1980 Developments

In 1980, national economic policies played an important role in both the sharp decline in economic activity and the subsequent strong rebound. An active monetary policy on the part of the Federal Reserve Board (Fed) throughout the year produced the widest swings in monetary growth in the past 20 years and record-high interest rates. While there were no new major fiscal policies enacted during the year, the interaction of the income tax and inflation produced a sizeable tax increase.

The year began under inflationary pressures generated by previous OPEC oil price increases and a generally high underlying rate of inflation that gained momentum as the economic expansion from 1974-75 began to reach its limits. Inflation, as measured by the Consumer Price Index, approached 17 percent during the month of January. As a result of both the appearance of run-away inflation and pressure from abroad concerning the value of the dollar, the Fed moved to re-establish U.S. and world confidence in its ability to manage the money supply.

In the final months of 1979, the Fed announced a significant policy shift which emphasized control of the monetary aggregates rather than interest rate control. The Fed reasserted this new objective in early March by imposing additional controls over the monetary aggregates and further reining in the money supply. Furthermore, the President, acting under the Credit Control Act of 1969, ordered the Fed to impose widespread credit controls on the economy that were intended to limit both consumer and business credit. General uncertainty concerning how the controls were to be implemented by all parties concerned caused a significant slowdown in spending which accelerated the economy's downward trend.

Fiscal policy was also restrictive at this time in the absence of any new policy prescriptions. Inflation continued to push taxpayers into higher tax rate brackets which automatically raised taxes, and this bracket creep drained the economy of about $15 billion and further reduced real spending in the economy.

An economic decline already in progress was intensified by these restrictive monetary and fiscal policies. The economy posted the sharpest one-quarter decline on record as real Gross National Product

(GNP) declined over 10 percent in the second quarter of 1980. This marked reduction in economic activity served to slow inflation and reduce interest rates, which set the stage for a rebound in the second half of the year.

Active Fed policies once again magnified the economic reaction which led to a rapid recovery, along with a resumption of double-digit inflation and new, record-high interest rates. In July, the Fed dismantled the credit controls. In addition, the Fed produced record-high growth in the money supply as M1-B rose almost 16 percent over the May to October period. This was in sharp contrast to the record fall of over 5 percent in M1-B from February to May. As a result of these policies, the economy recovered at an uncomfortably fast pace, with real GNP growing approximately 5 percent in the fourth quarter.

1981 Outlook

Fiscal and monetary policies are expected to play a key role in the course of the economy in 1981. With respect to fiscal policy, a Social Security tax increase, which was previously enacted in 1977, took effect on January 1, 1981. The tax hike raised the rate of the payroll tax to 6.65 percent from 6.13 percent. In addition, the base of the tax was increased to the first $29,700 of earnings from $25,900 the previous year. Inflation will also continue to produce a tax increase due to bracket creep. In sum, the Social Security tax increase and inflation are expected to increase taxes by upwards of $23 billion.

While these tax increases can be expected to bolster the revenue side of the federal budget, continued high unemployment, which serves to trigger greater spending in light of weaker revenues, and high inflation, which boosts federal expenditures that are linked to cost-of-living adjustments, will produce another deficit. The federal deficit is expected to be $65 billion in 1981, as both a personal and corporate tax cut totaling about $30 billion are assumed to be enacted at midyear. It is expected that the tax cut will be weighted toward the consumer, which should produce significant spending stimulus in the economy.

The Fed is expected to continue pursuing a monetary policy which focuses on growth in the monetary aggregates. The growth rates announced for M1-A and M1-B by the Fed are 3 to 5.5 percent, and 3.5 to 6 percent, respectively. The target for bank credit expansion is from 6 to 9 percent. The monetary policy assumptions built in to the 1981 forecast assume monetary growth will be at the upper limits of the Fed's targets.

To summarize, the first half of the year is expected to be weak, with only a gradual slowing of inflation and modest reductions in interest rates. During the second half of the year, a sustained path of economic growth is expected to emerge, stimulated by the tax cut and the continued gradual slowing of inflation and relatively stable interest rates.

THE MICHIGAN ECONOMY

- Employment and Unemployment
- Personal Income
- Prices
- Consumer Spending
- Population
- State and Regional Comparisons

EMPLOYMENT AND UNEMPLOYMENT

1980 Developments

Although the Michigan economy had begun to exhibit signs of slowing in 1979, the swift and severe declines in economic activity and employment in the early months of 1980 were unprecedented. Between January and April, total employment plummeted 262,000 persons and by May the unemployment rate climbed almost 6 percentage points from the December, 1979 level to 14.7 percent. This significant reduction in employment was the direct result of plunging motor vehicle production which dropped nearly 50 percent in the first half of 1980. A modest recovery in the motor vehicle sector lifted the economy from the depths of the recession in the latter half of the year, and, by year end, 70,000 additional workers found jobs.

The pattern of a slowing economy in 1979 followed by a sharp slide in 1980 is seen in the employment statistics presented in Table 3.

TABLE 3
Detroit SMSA and Balance of State Employment, 1978-1980
(Thousands)

	Labor Force	Employment	Unemployment	Unemployment rate
1978				
Detroit SMSA	2,003.2	1,871.2	132.2	6.6
All Others	2,198.8	2,041.8	156.8	7.1
Michigan	4,202.0	3,913.0	289.0	6.9
1979				
Detroit SMSA	2,056.2	1,895.1	161.1	7.8
All Others	2,256.8	2,082.9	173.9	7.7
Michigan	4,313.0	3,978.0	335.0	7.8
1980				
Detroit SMSA	2,035.9	1,773.5	262.4	12.9
All Others	2,279.1	2,007.5	271.6	11.9
Michigan	4,315.0	3,781.0	534.0	12.4

Source: Michigan Employment Security Commission.

TABLE 4
Selected Michigan SMSA Unemployment Rates, 1978-1980
(Percent)

	1978	1979	1980
Ann Arbor	5.4	5.9	8.3
Battle Creek	6.6	6.8	11.4
Flint	7.6	8.7	17.8
Grand Rapids	5.0	5.4	8.4
Kalamazoo	5.4	5.2	7.9
Lansing - E. Lansing	6.3	6.6	10.4
Upper Peninsula	10.6	10.4	11.8

Source: Michigan Employment Security Commission.

In 1979, statewide employment grew by 1.7 percent, which represented an increase of only 65,000 persons. As a result of these meager employment gains and continued growth in the labor force, the state's unemployment rate rose to 7.8 percent, which was about a full percentage point above the 1978 level. This trend of eroding employment opportunities, coupled with a growing number of job seekers in the labor force, was prevalent in both the Detroit SMSA and in other parts of the state.

The striking contrasts in Table 3 detail the severity of the 1980 recession. Total employment fell 197,000 to 3,781,000 persons in Michigan, as measured by the change in the annual averages, a 5 percent decline from 1979 levels. Unemployment increased 199,000 to 534,000 persons during the same period. The state's unemployment rate averaged 12.4 percent during 1980. This rate would have been considerably higher had it not been for discouraged workers that left the labor force due to a lack of job openings. The bleak job market halted growth in the labor force during 1980. Given the Detroit SMSA's concentration in motor vehicle manufacturing, the loss of employment was 6.4 percent in that area. For the same reason, the Detroit SMSA's unemployment rate of 12.9 percent was higher than the statewide average.

Unemployment rates around the state reflected a similar bias with higher rates found in the manufacturing centers linked to motor vehicle production. Table 4 presents the unemployment rates for six selected SMSAs and the upper peninsula. Flint recorded the highest annual average unemployment rate with 17.8 percent of its labor force unemployed in 1980. Both Battle Creek and Lansing-East Lansing also recorded double-digit unemployment rates, 11.4 percent and 10.4 percent, respectively. Ann Arbor, Grand Rapids and Kalamazoo had unemployment rates well under 10 percent. In the Upper Peninsula, the unemployment rate averaged 11.8 percent in 1980.

With the rise in the number unemployed came an increase in those claiming unemployment benefits; an additional 171,700 people claimed such benefits in the January to June, 1980 period than in the July to December, 1979 period. (See Table 5.) The percent of unemployed claiming benefits in the latter period reached 67.4 percent compared with 43.5 percent in the year earlier period. In addition, the number receiving extended benefits under the federal program continued to increase in 1980 to 77,900 in the July to December period.

TABLE 5
Michigan Unemployed and Unemployment Beneficiaries, 1978-1980
(Thousands)

Period	Average Number Unemployed	Average Claiming U.I. Benefits		Beneficiaries of Federal Program Average Claiming U.I. Benefits	
		Number	Percent	Number	Percent
1978					
Jan.-June	297.3	138.3	46.5	0.9	0.3
July-Dec.	281.3	109.6	39.0	0.0	0.0
1979					
Jan.-June	338.0	147.0	43.5	0.0	0.0
July-Dec.	333.8	180.8	54.2	47.8	14.3
1980					
Jan.-June	522.7	352.5	67.4	72.4	13.9
July-Dec.	633.8	295.5	46.6	77.9	12.3

Source: Michigan Employment Security commission.

Wage and Salary Employment

Wage and salary employment declined 4.5 percent in 1980, compared with a 5 percent drop in total employment. The total number of wage and salary workers in 1980 averaged 3,462,000 which was approximately 165,000 less than the previous year. The great majority of the decline was centered in the manufacturing sector but there was also a small loss in nonmanufacturing employment as well. The discussion and tables that follow present a comprehensive examination of employment in these sectors in addition to government employment.

Manufacturing Employment

Total manufacturing employment declined 160,600 to an annual average of 990,600 persons in 1980, as each of the 15 industrial categories exhibited a decline. This represented a 14 percent fall from 1979 levels. While the comparison of the annual averages clearly illustrates the magnitude of the recession's effects in Michigan, a comparison of the December to December decline demonstrates the moderate recovery in the latter half of the year. With respect to total manufacturing, the decline from December, 1979 to December, 1980 was 75,500 persons.

The decline in durable goods manufacturing employment was 141,400 persons in 1980, a 15.2 percent fall. Within the durable goods sector, motor vehicle manufacturing employment registered the largest employment drop — 17.9 percent. However, other sectors posted even larger percentage declines. For example, primary metals employment dropped 21.3 percent and fabricated metals employment dropped 18.1 percent. Lumber and wood manufacturing employment fell 19.1 percent during 1980. Table 6 provides similar detail for the other durable goods manufacturing sectors. Nondurable goods manufacturing employment detail is also presented in Table 6. The number of individuals employed in this sector declined by 19,300, or 8.7 percent during 1980.

Nonmanufacturing Employment

Overall, nonmanufacturing employment declined by 15,400 persons in 1980 as the significant erosion in manufacturing employment spread to other sectors. In addition, record-high interest rates served to curtail activity in the construction industry. Construction industry employment experienced the largest decline with a reduction of 18,200 employees, a 13 percent decline from the previous year. As indicated in Table 7, declines in the other nonmanufacturing sectors were much less with employment losses ranging from about 400 to 5,000 persons.

There were two sectors in the nonmanufacturing group that posted modest gains in 1980. Both finance, insurance and real estate, and services posted employment gains of 2.1 percent. These sectors combined for an employment gain of 16,200 persons for the year, and managed to continue growing during the recession, partially because unemployment benefits and other counter-cyclical aid helped the jobless continue to consume services from this group.

Government Employment

Table 8 illustrates that all sectors of government employment improved in 1980. While total government employment grew 1.8 percent, state government employment increased 2.8 percent. This is partly due to the need to add workers in those areas of government

that serve the needs of unemployed workers. Thus, the state government employment increase totaled 4,200 persons, which compared with increases of 5,900 persons at the local government level and 900 persons at the federal level; however, when measured from December, 1979 to December, 1980, there was no growth in the aggregate total of government employment, which stood at 642,300 persons at year's end.

1981 Outlook

The U.S. economy is expected to stage a modest recovery in 1981 which portends increased consumer spending. The primary forces behind the upturn are expected to be a $30 billion tax cut at the federal level, coupled with slowly falling inflation, and interest rates. Domestic motor vehicle sales and production are expected to benefit from this improvement, as will Michigan employment. This is because the economic recovery will aid domestic car buyers and because Michigan motor vehicle production shifted away from large cars and trucks at the beginning of the 1981 model year. (A comprehensive discussion of the motor vehicle sector is contained elsewhere in this report.)

Total employment is expected to reflect the moderate economic recovery and improved labor productivity with a modest gain of 1.2 percent. The number of employed persons projected for 1981 is 3,827,000, which represents an increase of 46,000. The level of employment expected in 1981 is 86,000 below that reached in 1978. With the resumption of employment growth, albeit moderate, the labor force is expected to start growing once again after standing still in 1980. The expected 1.6 percent growth rate for the labor force translates into a total of 4,383,000 persons in the labor market in 1981. The anticipated growth in the labor force is in excess of the projected employment growth and thus, the unemployment rate is expected to rise to 12.7 percent.

Wage and salary employment is also expected to increase 1.2 percent in 1981 with a gain of 41,300 persons to 3,504,100. Manufacturing employment is expected to recover by nearly 30,000 persons, while nonmanufacturing is expected to rise 18,000 persons. Government employment is expected to decline one percent, or over 6,000 persons. A summary of labor force and employment for the recent past and the 1981 projections is presented in Table 9.

PERSONAL INCOME

1980 Developments

The economic recession in 1980 had a devastating effect on personal income. During 1980, personal income totaled $91.2 billion compared with $86.6 billion in 1979, an increase of only 5.4 percent. This is the smallest increase in personal income since 1970. On a per capita basis, Michigan's personal income grew 4.8 percent compared with 10.4 percent in 1979. Table 10 presents a historical overview of personal income growth in both Michigan and the U.S.

While nominal personal income certainly reflects a weak economy in 1980, the true extent of this weakness becomes apparent when personal income is adjusted for inflation. During 1980, in terms of real purchasing power, Michigan's economy generated 9.1 percent less personal income than in 1979. On a per capita basis the decline was 9.6 percent. Both of these declines are very severe, in fact, they are the sharpest declines in real personal income since the early 1930s. Table 11 presents real Michigan personal and per capita income for the last 30 years.

There are a number of sources of income which comprise total personal income, but the major source is wage and salary disbursements. Other sources include proprietors' income, other labor income, transfer payments and income from interest, dividends and rent (property income). A detailed examination of each of these income sources for 1980 is presented below.

Wage and salary disbursements grew only 0.7 percent in 1980, the smallest change in 20 years. Factoring in the inflation rate of nearly 16 percent, real wages and salaries plummeted by a dramatic 13.1 percent. The major downturn in wages and salaries occurred in the manufacturing industries. The manufacturing sector tends to be the most volatile segment of the economy because its products are relatively more expensive and consequently consumers tend to postpone these major purchases during recessionary times. During 1980, total manufacturing wages and salaries dropped 8.3 percent as the faltering economy caused manufacturing employment to decline by a sharp 14.2 percent and average earnings edged up only 4.9 percent. The durable goods manufacturing industries paid out 9.7 percent less money in wages and salaries during 1980 than in 1979, due primarily to the motor vehicle industry. Motor vehicle production in Michigan was down 38.7 percent in 1980 causing employment to fall almost 19 percent. A more detailed look at the motor vehicle industry is presented on page 45. The nondurable manufacturing industries, which includes food, textiles, paper, printing and chemical production, also experienced a contraction in wage and salary payments, but by only one percent.

TABLE 6
Michigan Manufacturing Industry Employment, 1978-1980
(Thousands)

	1978	1979	December 1979	1980	December 1980	Percent Change 1979-80
Total Manufacturing	1,153.3	1,151.2	1,103.5	990.6	1,028.0	-14.0
Durable Goods	927.5	928.3	885.2	786.9	823.1	-15.2
Lumber, Wood	14.2	14.1	12.6	11.4	11.3	-19.1
Furniture, Fixtures	21.0	22.9	22.8	21.0	20.6	-8.3
Primary Metals	92.7	87.7	78.7	69.0	68.8	-21.3
Fabricated Metals	151.0	149.9	140.2	122.8	128.6	-18.1
Nonelectric Machinery	161.1	166.3	165.3	153.6	152.0	-7.6
Electric Machinery	42.3	41.3	41.5	38.4	40.2	-7.0
Motor Vehicles	389.0	389.8	369.9	319.9	351.7	-17.9
Other Transportation	14.0	13.4	12.4	10.9	10.4	-18.7
Other Durables	42.2	42.7	41.8	39.9	39.5	-6.6
Nondurable Goods	225.8	222.9	218.3	203.6	204.9	-8.7
Food, Kindred	52.5	52.3	52.1	51.3	50.5	-1.9
Textiles, Apparel	27.6	25.6	24.5	18.6	19.5	-27.3
Paper	23.0	23.8	24.3	21.7	21.0	-8.8
Printing, Publishing	33.4	34.2	34.1	32.9	33.7	-3.8
Chemicals, Petroleum	49.6	47.4	47.0	44.8	43.9	-5.5
Other Nondurables	39.7	39.6	37.3	34.3	36.3	-13.4

Source: Michigan Employment Security Commission.

TABLE 7
Michigan Nonmanufacturing Industry Employment, 1978-1980
(Thousands)

	1978	1979	December 1979	1980	December 1980	Percent Change 1979-80
Total Nonmanufacturing	1,797.8	1,853.7	1,880.5	1,838.3	1,865.5	-0.8
Construction	138.9	139.8	136.2	121.6	118.1	-13.0
Mining	11.8	13.4	13.1	13.0	13.0	-3.0
Trans., Comm., & Utilities	151.8	158.8	159.6	153.5	152.4	-4.0
Wholesale Trade	162.9	172.1	171.0	166.8	166.0	-3.5
Retail Trade	577.7	585.2	609.2	582.8	609.0	-0.4
Finance, Ins. & Real Estate	145.7	153.3	155.3	156.5	156.6	2.1
Services	609.0	631.1	636.1	644.1	650.4	2.1

Source: Michigan Employment Security Commission.

TABLE 8
Michigan Government Employment, 1978-1980
(Thousands)

	1978	1979	December 1979	1980	December 1980	Percent Change 1979-80
Total Government	617.7	623.0	642.4	634.0	642.3	1.8
Federal	55.0	56.0	55.3	56.9	56.3	1.6
State	142.8	150.3	157.3	154.5	161.0	2.8
Local	419.9	416.7	429.8	422.6	425.0	1.4

Source: Michigan Employment Security Commission.

TABLE 9
Michigan Labor Force and Employment, 1977-1981
(Thousands)

	1977	1978	1979	1980	1981[1]	Percent Change 1979-80	Percent Change 1979-80
Total Labor Force	4,124.0	4,202.0	4,313.0	4,315.0	4,383.0	0.0	1.6
Employment	3,786.0	3,913.0	3,978.0	3,781.0	3,827.0	-5.0	1.2
Unemployment	337.0	289.0	335.0	534.0	556.0	59.4	4.1
Unemployment Rate	8.2	6.9	7.8	12.4	12.7	59.0	2.4
Wage & Salary Employment	3,434.7	3,568.8	3,627.9	3,462.8	3,504.1	-4.6	1.2
Manufacturing	1,120.2	1,153.3	1,151.2	990.6	1,020.1	-14.0	3.0
Durable Goods	897.8	927.5	928.3	786.9	811.4	-15.2	3.1
Nondurable Goods	222.4	225.8	222.9	203.6	208.7	-8.7	2.5
Nonmanufacturing	1,717.8	1,797.8	1,853.7	1,838.3	1,856.3	-0.8	1.0
Construction	122.8	138.9	139.8	121.6	118.7	-15.5	-2.4
Trans., Comm., & Utilities	150.2	151.8	158.8	153.5	151.7	-4.0	-1.1
Wholesale Trade	151.8	162.9	172.1	166.8	165.1	-3.5	-1.0
Retail Trade	557.1	577.7	585.2	582.8	584.5	-0.4	0.3
Finance, Ins.,&Real Estate	142.2	145.7	153.3	156.5	160.3	2.1	2.4
Services	581.6	609.0	631.1	644.1	663.0	2.1	2.9
Mining	12.1	11.8	13.4	13.0	13.0	-3.0	0.0
Government	596.7	617.7	623.0	634.0	627.7	1.8	-1.0
Workers in Disputes	6.9	5.4	5.2	6.6	---	---	---

[1]Estimates.

Source: Michigan Employment Security Commission.

TABLE 10
U.S. and Michigan Personal and Per Capita Income, 1950-1980

Year	Michigan Personal Income (millions)	Percent Change	U.S. Personal Income (millions)	Percent Change	Michigan Per Capita Income	Percent Change	U.S. Per Capita Income	Percent Change	Michigan Per Capita Income As Percent of U.S. Per Capita Income
1950	$10,895	13.2	$ 226,214	9.9	$1,701	N.A.	$1,496	N.A.	113.7
1951	12,176	11.8	253,232	11.9	1,874	10.2	1,645	10.9	113.9
1952	13,050	7.2	269,769	6.5	1,962	4.7	1,733	5.3	113.2
1953	14,741	13.0	285,456	5.8	2,161	10.1	1,796	3.6	120.3
1954	14,354	-2.4	287,607	0.7	2,031	-6.0	1,785	-0.6	113.8
1955	15,900	10.8	308,266	7.1	2,183	7.5	1,867	4.6	116.9
1956	16,529	4.0	330,479	7.2	2,214	1.4	1,975	5.8	112.1
1957	16,870	2.1	348,460	5.4	2,229	0.7	2,045	3.5	109.0
1958	16,520	-2.0	356,939	2.4	2,155	-3.3	2,049	0.2	105.2
1959	17,520	6.1	380,014	6.5	2,256	4.7	2,145	4.7	105.2
1960	18,225	4.0	396,086	4.2	2,326	3.1	2,201	2.6	105.7
1961	18,169	-0.3	411,301	3.8	2,302	1.0	2,248	2.1	102.4
1962	19,450	7.1	436,894	6.2	2,452	6.5	2,353	4.7	104.2
1963	20,770	6.8	459,075	5.1	2,578	5.1	2,436	3.5	105.8
1964	22,767	9.6	491,341	7.0	2,781	7.9	2,572	5.6	108.1
1965	25,386	11.5	532,022	8.3	3,038	9.2	2,750	6.9	110.5
1966	27,723	9.2	579,158	8.9	3,257	7.2	2,963	7.7	109.9
1967	29,046	4.8	620,020	7.1	3,366	3.3	3,142	6.0	107.1
1968	32,097	10.5	677,786	9.3	3,691	9.7	3,401	8.2	108.5
1969	34,803	8.4	738,233	8.9	3,963	7.4	3,667	7.8	108.1
1970	35,955	3.3	793,485	7.5	4,041	2.0	3,893	6.2	103.8
1971	39,191	9.0	851,952	7.4	4,371	8.2	4,132	6.1	105.8
1972	43,432	10.8	935,463	9.8	4,804	9.9	4,493	8.7	106.9
1973	48,467	11.6	1,045,303	11.7	5,341	11.2	4,981	10.9	107.2
1974	51,850	7.0	1,147,257	9.8	5,687	6.5	5,428	9.0	104.8
1975	54,738	5.6	1,248,631	8.8	6,008	5.6	5,861	8.0	102.5
1976	61,601	12.5	1,374,189	10.1	6,760	12.5	6,401	9.2	105.6
1977	69,567	12.9	1,523,861	10.9	7,604	12.5	7,043	10.0	108.0
1978	78,170	12.4	1,713,894	12.5	8,514	12.0	7,854	11.5	108.4
1979	86,572	10.7	1,930,742	12.7	9,403	10.4	8,773	11.7	107.2
1980[1]	91,214	5.4	2,143,124	11.0	9,853	4.8	9,481	8.1	103.9

[1]Estimate.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

The wages and salaries generated by the nonmanufacturing industries increased 6.3 percent to $25.6 billion in 1980. Compared with the manufacturing industries this is a much better growth rate, but in real terms it still translates into a decline of 8.2 percent. The contract construction industry was the nonmanufacturing industry most seriously affected by the economic recession as the falling real income of potential homebuyers and the unprecedented high mortgage rates greatly curtailed activity in the building industry. Construction employment dropped 13 percent and the average work week fell 4.2 percent. As a result, wages and salaries from the construction industry tumbled 5.6 percent. Also experiencing adverse effects from the recession were the retail trade, wholesale trade and transportation, communication and utilities industries. Wages and salaries grew only 5 percent in retail trade and 5.2 percent in the wholesale trade industry. The sharp slowdown in the motor vehicle industry had a particularly severe impact on the trucking industry and was the major reason that wages and salaries generated by the transportation, communication, and utilities industries grew by only 3.2 percent in 1980.

The bright spots in an otherwise dismal economy were the nonmanufacturing industries of services and finance, insurance, and real estate. The wages and salaries paid by the services industry grew 12.1 percent in 1980, marking the fifth consecutive year of greater than 10 percent growth. This relatively strong growth, suggests that our society is becoming very dependent on specialized services. Despite the poor conditions in the real estate industry, the wages and salaries produced by the finance, insurance, and real estate industries increased 9.5 percent in 1980. The extremely high rate of inflation encouraged an increasing number of people to more carefully invest available funds in an attempt to "beat" inflation and thus the financial industry benefited in 1980.

Government wages and salaries grew 9.8 percent in 1980, compared with 11.1 percent in 1979. This relatively robust growth is a typical occurrence during recessionary times because the demands on government increase dramatically. During 1980, government employment increased 1.6 percent, largely due to record levels in unemployment insurance claims and the welfare caseload.

1981 Outlook

Economic activity is expected to generally improve in 1981, particularly in the last half of the year. More specifically, real GNP is forecast to increase 0.7 percent and Michigan motor vehicle production is expected to rise 25 percent. The improvement in the automobile industry will also help revive other manufacturing industries as well as the transportation, communication, and utilities industries and the retail trade industry. Relatively strong growth in services and the finance, insurance, and real estate sector is also expected to continue in 1981. As a result, Michigan employment is forecast to increase a

TABLE 12
Michigan Personal Income, 1979, 1980 and 1981 Forecast
(Millions)

	1979	1980	1981 Forecast	1979-80 Percent Change	1980-81 Percent Change
Wage and Salary Disbursements by Place of Work	$57,575	$57,964	$ 63,920	0.7	10.3
Farms	170	185	204	8.7	10.0
Manufacturing	24,333	22,308	25,027	-8.3	12.2
Durables	20,453	18,467	20,775	-9.7	12.5
Nondurables	3,880	3,841	4,252	-1.0	10.7
Nonmanufacturing	24,102	25,626	28,152	6.3	9.9
Contract Construction	2,665	2,515	2,716	-5.6	8.0
Trans., Comm. & Utilities	3,196	3,298	3,611	3.2	9.5
Wholesale Trade	3,136	3,299	3,546	5.2	7.5
Retail Trade	5,044	5,296	5,677	5.0	7.2
Finance, Ins. & Real Estate	2,086	2,284	2,535	9.5	11.0
Services	7,690	8,637	9,743	12.1	12.8
Mining	285	297	324	4.2	9.1
Government	8,869	9,739	10,420	9.8	7.0
Other Industries	101	106	117	5.0	10.0
Other Labor Income	7,688	7,803	8,739	1.5	12.0
Proprietors' Income	4,276	4,190	4,534	-2.0	8.2
Farm	808	760	866	-6.0	14.0
Nonfarm	3,468	3,430	3,668	-1.1	6.9
TOTAL Labor & Proprietors Income by Place of Work	69,539	69,963	77,193	0.6	10.2
Less: Contributions for Social Insurance	3,512	3,547	4,256	1.0	20.0
Plus: Residence Adjustment	447	474	517	6.0	9.0
NET Labor & Proprietors' Income by Place of Residence	66,474	66,890	73,454	0.6	9.7
Property Income	9,996	11,695	13,098	17.0	12.0
Transfer Payments	10,103	12,629	14,523	25.0	15.0
TOTAL Personal Income	$86,573	$91,214	$101,075	5.4	10.8

Source: U.S. Department of Commerce, Bureau of Economic Analysis; Michigan Department of Management and Budget.

modest 1.2 percent. This increase in combination with a 9 percent increase in average compensation per worker and little change in average hours worked will result in an estimated 10.3 percent increase in Michigan wages and salaries. (See Table 12.)

Total personal income is expected to increase 10.8 percent -- more than double the growth rate in 1981. In real terms, however, Michigan personal income will decline an estimated 0.8 percent. An estimated 15 percent increase in transfer payments will offset below average increases in construction and government and will help offset the large increase in contributions for social insurance. To arrive at total personal income the contributions to social insurance, which are automatically withheld from workers' paychecks, are subtracted from the sum of wages and salaries, other labor income and proprietors' income. In 1981, these social insurance contributions will have a dampening effect on personal income growth because social security taxes are increasing. The social security tax rate is increasing to 6.65 percent from 6.13 percent and the maximum taxable income is rising to $29,700 from $25,900. These tax increases in combination with the expected increases in wages and salaries, other labor income and proprietors' income, should result in a 20 percent increase in social insurance contributions.

PRICES

1980 Developments

Inflation continued to be the economy's number one problem in 1980. According to the Detroit Consumer Price Index (DCPI) for all urban consumers, retail prices jumped at the alarming rate of 15.9 percent in 1980, up from the 12.7 percent gain in 1979. The 15.9 percent inflation rate in 1980 is the largest one-year increase in consumer prices since 1920 when prices jumped 19.6 percent.

Two of the major contributing factors to inflation in 1980 were the rising price of oil and the fall in labor productivity. The price of OPEC oil rose approximately 20.7 percent in 1980 and the price of U.S. domestic oil jumped 74 percent, due in part to the decontrol of domestic oil prices. In the U.S., labor productivity declined an estimated 1.1 percent in 1980. This is a serious problem because as the output per worker-hour falls, it costs more to produce each unit of output and therefore adds to inflation.

One other important factor which contributed to inflation in 1980 was the self-perpetuating nature of inflation itself. The high level of inflation prompted workers, particularly those in unions, to demand wage increases that would help keep their real incomes from falling. As a result unit labor costs rose an average of 11 percent in the U.S. in 1980. These higher labor costs, particularly in combination with the fall in productivity, exacerbated the inflationary problem.

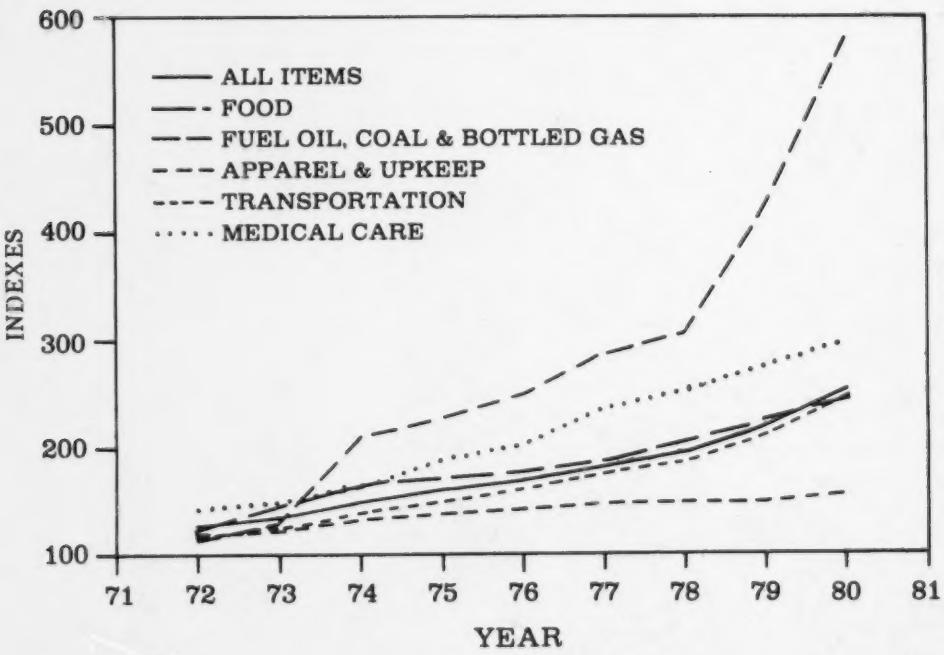
Consumer prices in Michigan, as measured by the DCPI, climbed the most in the housing sector. In 1980, housing-related prices, which include the cost of houses, fuel and utilities, and furnishings for the home, jumped 21.6 percent, following an increase of 16.6 percent in 1979. The major impetus for this significant increase was provided by mortgage rates and home heating costs. The homeownership index, which reflects the price changes in houses, mortgage rates, taxes, and insurance, rose 28.5 percent, primarily due to the sharp 20 percent increase in mortgage rates. Fuel oil, coal, and bottled gas prices jumped 36.9 percent, compared with 38.6 percent in 1979. The prices of household furnishings rose 7.9 percent in 1980, down slightly from the 8.1 percent increase in 1979.

Also rising significantly in 1980 were transportation-related prices. These prices, which reflect both public and private transportation, increased 17.5 percent, up from the 13.6 percent increase in 1979. This increase was led by gasoline prices which rose 35.2 percent. Public transportation prices, which include the prices for intracity and intercity buses, taxicabs, railroads, and airplanes, rose 22.5 percent in 1980 compared with only 7.5 percent in 1979.

The increase in food prices slowed to 7.9 percent in 1980 from 10.3 percent in 1979. Most of this slower growth can be attributed to the prices of meats, poultry, fish, and eggs. In 1979, the prices of these items rose 14.7 percent, but in 1980 improved supplies, particularly of meats, coupled with a slight decline in demand due to the diminishing real income of households caused the combined prices of these goods to rise only 4.2 percent. Cereal and bakery products rose 11.2 percent, fueled in part by the sharp increase in sugar prices. In fact, at the end of 1980, sugar prices were up over 30 percent from the year-ago level, due to the 5.5 percent decline in world sugar production in 1979. The prices of dairy products rose 9.5 percent, down from the 17.1 percent boost in 1979.

Apparel and upkeep prices rose a relatively modest 5.1 percent in 1980 after experiencing no change in 1979. The prices of women's and girls' apparel rose 7.2 percent in 1980 while men's and boys' dropped 0.5 percent. This is the second consecutive year that men's and boys' apparel prices have actually declined. The prices of footwear rose 3.3

CHART 1
Detroit Consumer Price Index, 1972-1980
(1967=100)



Source: U.S. Department of Labor, Bureau of Labor Statistics.

percent compared with a 6.2 percent gain in 1979. Apparel and upkeep prices traditionally demonstrate only modest changes due to the influence of strong competition from relatively less expensive foreign products.

1981 Outlook

During 1981, consumer prices are expected to rise 11.7 percent, down from the 15.9 percent gain in 1980. Table 13 presents the inflation forecast for 1981. There are several factors which will contribute to this slower increase in consumer prices. First, the economy is expected to stay fairly weak during the first half of 1981, which will cause real income to erode further and therefore diminish the demand for goods and services. This fall in demand is expected to relieve some of the inflationary pressures. Second, the weak economy will likely allow the Federal Reserve to loosen the tight rein on the money supply which will help reduce interest rates. This, too, will help dampen inflation, particularly in regard to mortgage rates. Third, the cost of home-heating resources, which has been one of the major sources of inflation during the past two years, is expected to slow down significantly during 1981. Conservation efforts and a relatively mild winter in 1980 have resulted in excellent supplies of home-heating resources in Michigan. Consequently, the price of fuel oil, coal and bottled gas are expected to increase 11.2 percent in 1981, compared with 36.9 percent in 1980. However, the accelerated removal of domestic oil price controls will cause most of this projected increase to occur in the first half of the year.

The full effect of these three factors will be negated somewhat by rising food prices and increasing labor costs. The beef cycle will result in short supplies of red meats and the drought in the summer of 1980 reduced the production of a number of crops. Consequently, retail food prices are expected to rise 12.3 percent in 1981 compared with 7.9 percent in 1980. Labor costs are expected to rise even faster in 1981 than in 1980. Real income has been falling for the past two years and labor is expected to try to at least maintain their current real earnings level, and the result will be an increase in labor costs of approximately 11 percent.

CONSUMER SPENDING

1980 Developments

Consumer spending in 1980, as measured by Michigan retail sales tax collections, turned downward, falling nearly one percent from 1979 levels. Adjusted for inflation, real consumer spending fell 14.5 percent. The critical slowdown in consumption activity was directly related to the national recession and its impact on various sectors of the economy.

The most severe reduction in spending was in automotive sales, down almost 27 percent in 1980 as high interest rates increased the effective cost of automobiles and reduced demand. Other automotive-related sales increased 17.3 percent, primarily reflecting the rapid rise in gasoline prices. At the same time, the recession pushed the unemployment rate to 12.4 percent in 1980, wages and salaries increased only 0.7 percent, and consumer prices increased 15.9 percent. These factors together resulted in greater constraints on discretionary purchases as real personal income declined 9.1 percent.

Building material sales were down 14.3 percent in 1980 as record high interest rates slowed construction activity. Michigan building

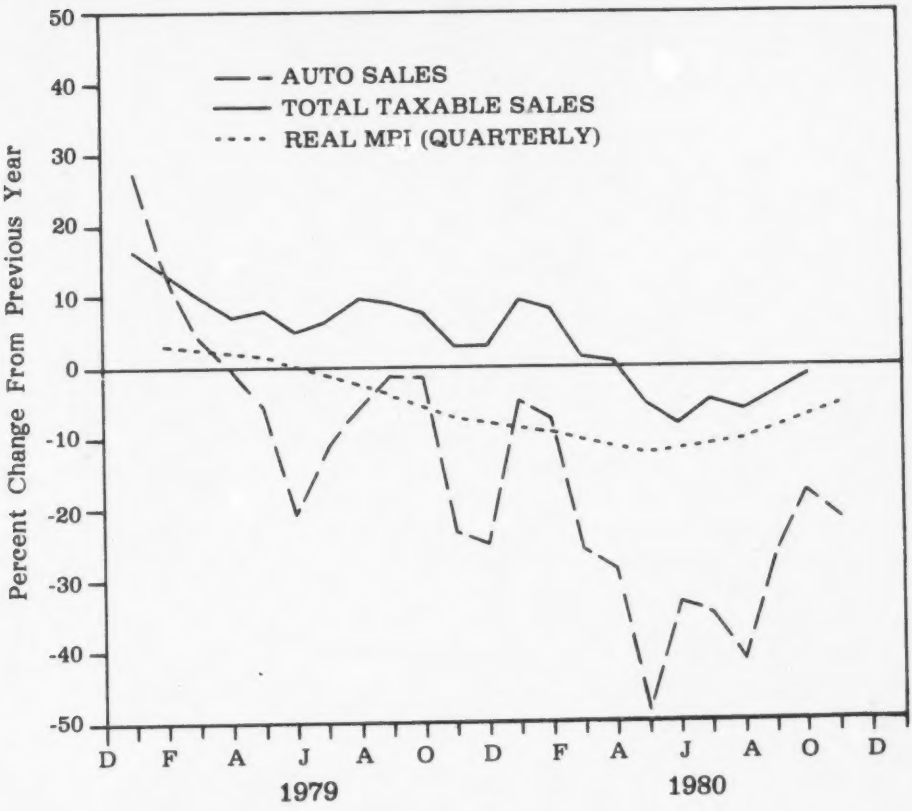
TABLE 14
Quarterly Michigan Retail Sales Tax Collections, 1976-1981
(Millions)

	I	II	III	IV	Total	Percent Change
1976	$256.0	$271.3	$285.1	$282.2	$1,094.6	13.2
1977	293.0	307.0	326.7	326.7	1,253.4	14.5
1978	322.9	347.4	365.6	365.6	1,401.5	11.8
1979	362.3	375.5	391.2	389.0	1,518.0	8.3
1980	384.8	368.5	366.6	383.7	1,503.6	-0.9
1981[1]	406.1	407.8	419.0	440.9	1,673.8	11.3

[1] Estimate.

Source: Michigan Department of Treasury.

CHART 2
Michigan Total Taxable Sales, Auto Sales, and Real Personal Income, 1979-1980



Source: Michigan Department of Management and Budget.

permits in 1980 fell 42 percent, the second year of significant decline. The companion category of furniture sales also fell by nearly 4 percent.

Miscellaneous retail and general merchandise sales grew about one percent in 1980; however, wholesale trade was off 4.8 percent. Petroleum-related sales and utility-service sales were up 18.4 percent and 15 percent, respectively, the double-digit increases reflecting price rather than consumption level increases.

Retail sales increased 6.2 percent in the first quarter of 1980. In the second quarter, however, consumption declined about 2 percent. As economic activity faltered further and consumer installment credit purchases advanced, retail sales declined 6.3 percent in the third quarter. In the final quarter of 1980, Michigan retail sales were off 1.4 percent from the prior year level.

TABLE 11
U.S. and Michigan Real Personal and Per Capita Income, 1950-1980[1]
(1967 Dollars)

Year	Real Michigan Personal Income (millions)	Percent Change	Real U.S. Personal Income (millions)	Percent Change	Real Michigan Per Capita Income	Percent Change	Real U.S. Per Capita Income	Percent Change	Real Michigan Per Capita Income as Percent of U.S. Real Per Capita Income
1950	$14,924	N.A.	$ 313,750	N.A.	$2,330	N.A.	$2,074	N.A.	112.3
1951	15,452	3.5	325,491	3.7	2,378	2.1	2,114	1.9	112.4
1952	16,171	4.7	339,332	4.3	2,431	2.2	2,180	3.1	111.5
1953	17,977	11.2	356,375	5.0	2,635	8.4	2,242	2.8	117.5
1954	17,441	-3.0	357,276	0.3	2,468	-6.3	2,217	-1.1	111.3
1955	19,343	10.9	384,372	7.6	2,656	7.6	2,328	5.0	114.1
1956	19,724	2.0	405,994	5.6	2,642	0.5	2,426	4.2	108.9
1957	19,571	-0.8	413,357	1.8	2,586	-2.1	2,426	0.0	106.6
1958	18,880	-3.5	412,170	-0.3	2,463	-4.8	2,366	-2.5	104.1
1959	20,046	6.2	435,297	5.6	2,581	4.8	2,457	3.8	105.0
1960	20,663	3.1	446,546	2.6	2,637	2.2	2,481	1.0	106.3
1961	20,484	-0.9	459,041	2.8	2,595	-1.6	2,509	1.1	103.4
1962	21,879	6.8	482,223	5.1	2,758	6.3	2,597	3.5	106.2
1963	23,129	5.7	500,627	3.8	2,870	4.1	2,656	2.3	108.1
1964	25,157	8.8	528,892	5.6	3,073	7.1	2,769	4.3	111.0
1965	27,415	9.0	562,986	6.4	3,281	6.8	2,910	5.1	112.7
1966	28,669	4.6	595,842	5.8	3,368	2.7	3,048	4.7	110.5
1967	29,046	1.3	620,020	4.1	3,366	-0.1	3,142	3.1	107.1
1968	30,774	5.9	650,466	4.9	3,539	5.1	3,264	3.9	108.4
1969	31,467	2.3	672,343	3.4	3,583	1.2	3,340	2.3	107.3
1970	30,626	-2.7	682,274	1.5	3,442	-3.9	3,347	0.2	102.8
1971	32,203	5.1	702,351	2.9	3,592	4.4	3,406	1.8	105.5
1972	34,415	6.9	746,579	6.3	3,807	6.0	3,586	5.3	106.2
1973	36,035	4.7	785,352	5.2	3,971	4.3	3,742	4.4	106.1
1974	34,775	-3.5	776,748	-1.0	3,814	-4.0	3,675	-1.8	103.8
1975	34,147	-1.8	774,585	-0.3	3,748	-1.7	3,636	-1.1	103.1
1976	36,472	6.8	805,976	4.1	4,002	6.8	3,754	3.2	106.6
1977	38,564	5.7	839,593	4.2	4,215	5.3	3,880	3.4	108.6
1978	40,273	4.4	877,121	4.5	4,386	4.1	4,019	3.6	109.1
1979	39,567	-1.8	888,106	1.3	4,298	-2.0	4,035	0.4	106.5
1980[2]	35,982	-9.1	868,364	-2.2	3,887	-9.6	3,842	-4.8	101.2

[1] Michigan personal income deflated by Detroit CPI; U.S. personal income deflated by U.S. CPI.
[2] Estimate.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

TABLE 13
Price Changes for the Detroit CPI, 1979, 1980 and 1981 Forecast
(Percent)

	1979	1980		1981 Forecast	
	Annual Average	Dec. '79 to Dec. '80	Annual Average	Dec. '80 to Dec. '81	Annual Average
All Items	12.7	15.7	15.9	11.3	11.7
Food	10.3	10.2	7.9	11.1	12.3
Housing	16.6	20.1	21.6	14.9	15.8
Home Ownership	22.0	25.2	28.5	19.8	22.0
Fuel Oil, Coal and Bottled Gas	38.6	18.9	36.9	13.5	11.2
Hsehold. Furnish. & Oper.	8.1	8.9	7.9	6.0	6.5
Apparel and Upkeep	0.0	7.2	5.1	3.5	4.0
Transportation	13.6	16.5	17.5	11.1	10.5
Private	13.9	16.3	17.3	10.9	10.0
Gasoline[1]	35.2	18.9	39.2	20.0	15.0
Public	7.5	22.4	22.5	14.3	15.0
Medical Care	9.0	5.6	8.5	8.5	8.6

[1]U.S. CPI.

Source: U.S. Department of Labor, Bureau of Labor Statistics; Michigan Department of Management and Budget.

1981 Outlook

After three years of a declining rate of growth in retail sales, a mild recovery is expected in 1981 leading to a stronger performance in 1982. The key determinant of the level of consumption, personal income, is expected to increase 10.8 percent during 1981 although the real level of personal income will still decline.

Wage and salary growth will exceed 10 percent for the year, reversing the 1980 decline. By the second half of 1981, wage and salary payments will be 12 percent above 1980 levels. An anticipated $30 billion federal tax cut expected to be effective at midyear will further promote increased consumption activity as disposable incomes are increased. The expected slower growth in the first half of 1981 is due, in part, to the reduced paychecks workers receive as a result of the social security tax increase, effective the first of the year.

The rate of price increases, as measured by the Detroit Consumer Price Index (DCPI), is expected to slow in 1981 to 11.7 percent, with even lower increases in the second half of the year, signalling to the consumer a slowing of the double-digit inflation rates of the prior two years. Although real income levels are still expected to decline in 1981, slower rates of growth in consumer prices will help promote increased consumption in the second half of the year. However, above average price increases for certain nontaxable items such as housing and food will reduce discretionary spending on taxable items and dampen retail sales tax collections.

Interest rates in 1981 are expected to fall from their late 1980 peak levels thereby promoting increased production and building activity. Although this will have a beneficial impact on total employment and income the major positive impact will be on building material and furniture sales, two of the major components of the sales tax and areas of significant weakness in 1980.

The Conference Board and University of Michigan's consumer confidence indices indicated significantly increased levels of confidence in the economy in late 1980, however, a declining percentage of respondents indicated they intend to buy major durable items or automobiles in the early part of 1981. This observation supports the belief that price-sensitive consumers are tending to retain goods longer, choosing to repair rather than replace items, when possible. Evidence also indicates that declining real incomes are causing an increase in the number of two-income families, which is a positive factor for retail sales.

To summarize, consumption growth will be sluggish in the early months of 1981 due to declining real income, high interest rates, and the negative impact of the large social security tax increase. By the summer of 1981, the expected federal tax cut, lower interest rates, moderating inflation, and improved markets for automobiles and housing will spur a relatively strong rebound in retail sales.

Based on the assumptions outlined above, Michigan taxable retail sales in 1981 are projected to increase 11.3 percent above the severely

depressed 1980 level; however, the increase in the first half of the year will be only 8 percent. (See Table 14.) The automotive component of retail sales is projected to increase approximately 12 percent. After adjustment for expected price changes, Michigan retail sales will actually decline 0.4 percent in 1981.

TABLE 15
Michigan Retail Sales Tax Collections
By Component, 1979-1980[1]
(Millions)

Component	1979	Percent Change	1980	Percent Change
Building Materials	$ 117.4	10.5	$ 100.7	-14.3
General Merchandise	146.5	5.4	147.7	0.9
Automotive	382.2	4.0	341.2	-10.7
New and Used Vehicles	243.4	-3.0	178.4	-26.7
Service Stations, Other	138.8	19.0	162.8	17.3
Food	230.8	8.4	246.5	6.8
Restaurants and Taverns	121.0	8.9	128.1	5.9
Food Stores and Caterers	109.8	7.8	118.4	7.8
Apparel	66.4	6.1	67.3	1.4
Furniture	70.7	8.4	68.0	-3.8
Miscellaneous Retail	148.2	8.6	149.9	1.1
Drug, Beer, Liquor Stores	36.6	10.9	39.2	7.1
Other Retail Stores	111.6	7.8	110.7	-0.8
Nonretail	362.8	14.0	389.6	7.4
Gas and Electricity	114.9	10.0	132.1	15.0
Wholesale Trade	33.4	15.2	31.8	-4.8
Petroleum and Products	33.1	34.0	39.2	18.4
Other	181.4	13.4	186.5	2.8
TOTAL	$1,525.0	8.3	$1,510.9	-0.9

[1]Includes penalty, interest, and license fees. Sales figures do not correspond perfectly with the calendar year because collections lag behind activity by one month.

Source: Michigan Department of Treasury.

POPULATION

1980 Developments

According to preliminary 1980 Census of Population and Housing data, Michigan's population, as of April 1, 1980, totals 9,258,344. This represents an increase of 376,518 persons from the state's population of 8,881,826, a decade ago. Population growth in Michigan slackened during the past 10 years, growing only 4 percent since the last decennial census, less than one-third the growth rate Michigan experienced between 1960 and 1970. The growth rate of Michigan's population used to be higher than the national rate, but is now below the national level. The U.S. population increased 11 percent to 226,504,805 between 1970 and 1980, compared with Michigan's growth rate of only 4 percent. The proportion of the U.S. population residing in Michigan also has decreased from 4.4 percent in 1970 to 4.1 percent in 1980. Slower population growth caused Michigan to become the eighth largest state in population, dropping from the seventh place rank held since the turn of the century.

In fact, Michigan's population growth in the past 10 years exemplifies a national trend. The population is shifting from northeastern and north central industrial states to southern and western states. All northeastern states, (except Maine, New Hampshire, and Vermont whose populations grew by 15 percent or more) experienced a population decline or a very slow rate of growth (2.7 percent or less). The largest decline occurred in the State of New York, which experienced a population decline of 3.8 percent between 1970 and 1980. Among the north central states, Ohio and Illinois gained only 1.3 and 2.8 percent respectively. All other states in the north central region, except Iowa and South Dakota grew in population at rates higher than Michigan. However, despite the slackening of population growth in the past 10 years, Michigan still had the largest absolute increase in population among the northeastern and north central states.

The primary cause of the slow population growth is out-migration from Michigan since 1970. Although Michigan continues to receive migrants from such states as Ohio and Illinois, the number of people moving to the south and west exceeds the number of people moving in. The net loss through in-and out-migration between 1970 and 1980 was about 304,000. By contrast, Michigan had a net gain of 31,900 persons through migration between 1960 and 1970. (See Table C-36 in Appendix C).

Although the overall growth rate of the population in Michigan slowed, 90 percent of Michigan's counties gained population during the past 10 years. The preliminary 1980 census counts indicate 17 counties grew by more than 30 percent from the 1970 census counts: these

include Alcoma, 36.6 percent; Arenac, 32.3; Clare, 42.8; Crawford, 46.2; Gladwin, 47.2; Grand Traverse, 39.6; Kalkaska, 103.4; Lake, 37.8; Lapeer, 33.7; Livingston, 70.0; Mecosta, 31.9; Missaukee, 40.3; Montmorency, 42.3; Ogemaw, 38.1; Oscoda, 44.8; Otsego, 43.8; and Roscommon, 65 percent. With the exception of Livingston and Lapeer, all the fast growing counties are located in the northern lower peninsula. Other fast growing counties (those with growth rates between 20 and 30 percent) are located either in the northern lower peninsula or in areas adjacent to the central counties of metropolitan areas. Most moderately growing counties (growth rates between 10 and 20 percent) are located in the southern lower peninsula, and tend to cluster in the metropolitan fringe-areas surrounding Michigan's major urban centers. (See Chart 3.) The slow growing counties (growth rates of less than 10 percent) are located mainly in southern lower Michigan and the upper peninsula. Those counties which contain the central cities of Standard Metropolitan Statistical Areas (SMSA) experienced particularly slow rates of growth. Bay County grew 2.1 percent; Genesee, 1.1; Ingham, 4.3; Jackson, 5.1; Kalamazoo, 5.1; Kent, 8; and Saginaw, 3.7 percent. Nine counties even lost population during the past decade. These counties include Calhoun, with a decline of 8 percent; Chippewa, -10.6; Gogebic, -5.1; Iron, 1.5; Keweenaw, -13.8; Luce, -1.9; Ontonagon, -6.8; and Wayne, -12.9 percent. Wayne County alone declined by 325,000 persons since 1970. Most declining counties are located in the upper peninsula.

Turning from county growth patterns to cities, the data reveal that many major cities with populations of 30,000 or more in Michigan experienced a general decline in population during the past 10 years. With the exception of Ann Arbor, almost every city with more than 50,000 residents in 1970 had a net population loss between the two censuses. The most dramatic change occurred in the City of Detroit where population decreased by 321,861 or 21.3 percent. Other cities with net losses of more than 15 percent include Bay City, -15.9; Dearborn Heights, -15.5; Flint, -17.5; Lincoln Park, -15.1; Royal Oak, -17.9; and Saginaw, -15.6 percent. All of these are either older industrial cities associated with auto manufacturing or older suburbs of Detroit.

Despite the overall decline of population in these larger cities, some other major cities in Michigan gained substantial numbers of people in the past 10 years. These cities include Ann Arbor with a growth rate of 3.5 percent; Farmington Hills, 18.9; Portage, 13.7; Southfield, 8.9; Sterling Heights, 77.6; Taylor, 10.6; Troy, 70; and Wyoming, 5.4 percent. None of these are major manufacturing centers nor are they directly dependent on the auto industry.

Among the twelve metropolitan areas, including Monroe County which is part of the Toledo SMSA in Ohio, only the Detroit SMSA (Wayne, St. Clair, Oakland, Macomb, Livingston, and Lapeer County) lost population in the past 10 years. All of the other SMSAs experienced some degree of population growth. Because the major SMSA cities have experienced general population declines, growth in these areas is primarily due to increasing population in suburban areas of

urban-fringe counties. With the exception of the Ann Arbor SMSA, all central SMSA counties which contain central cities experienced net out-migration between 1970 and 1980. On the contrary, all other SMSA counties without central cities gained population through in-migration. For example, net in-migration to Livingston county constituted more than 80 percent of total population growth in the past 10 years. However, the increase in fringe areas of SMSAs did not compensate for loss through out-migration from central SMSA counties. Thus, for metropolitan areas as a whole, the net loss through migration was substantial (437,000).

Nonmetropolitan areas in Michigan grew by 239,000 persons, a 15.6 percent increase, between the two censuses. Forty-seven percent of this occurred in the southern half of the lower peninsula from Bay County to Oceana County, and about the same percentage occurred in the lower peninsula, north of this line. Another six percent occurred in the upper peninsula. Because the nonmetropolitan counties in the southern lower peninsula have a larger population base, this increase only represents 13.3 percent growth from the last census, while the northern lower peninsula as a whole gained by 29 percent during the 10 years. About 90,000 people moved to the lower peninsula, with only 43,000 people moving to the southern lower nonmetropolitan areas. More than 80 percent of the population growth in the northern lower peninsula was due to in-migration, while less than 40 percent of the growth in the southern lower nonmetropolitan areas was due to in-migration. Most of the migrants to the northern lower peninsula came from metropolitan areas in the lower peninsula, especially from the Detroit metropolitan area, which accounts for 44 percent of the migrants from southern Michigan's metropolitan areas. Retirement was found to be an important reason for people to move to the northern lower peninsula, and changing employment structure in nonmetropolitan areas in general also causes the influx of migrants to small towns and rural areas in the great lake region.

Population growth in the upper peninsula during the 1970s was not spectacular. 5.2 percent, nor was it evenly spread among the region's fifteen counties. Most of the growth is in the central upper peninsula where Delta, Dickinson, Houghton, and Marquette together gained about 8,000 people through migration. However, Chippewa, Gogebic, Keweenaw, Luce, and Ontonagon continued to lose population. The closing of Kincheloe Air Force Base and declining employment at the White Pine Mine are two major reasons for the population loss in these counties. Although the upper peninsula as a whole gained only 5,681 people, this growth is very significant since the upper peninsula had lost population steadily for fifty years until the last decade.

Although nonmetropolitan areas or less urbanized areas have gained population and experienced rapid growth in the northern lower peninsula, 80 percent of Michigan's population still lives in twelve metropolitan areas. More than 90 percent of the total population still resides in the southern half of the lower peninsula.

CHART 3
Percent Change in Michigan Population, 1970-1980

Source: U.S. Department of Commerce, Bureau of the Census.

1981 Outlook

Michigan has suffered extraordinary economic difficulties and has experienced high rates of unemployment since 1979. The April 1, 1980 census may not have captured the impact of the economy and unemployment on population change. Thus, Michigan's population in 1981 is expected to grow even slower than the rate experienced between 1970 and 1980. Although the number of women in the child-bearing ages continues to increase, the number of live births in the first six months of 1980 was 70,524, a 0.3 percent decline from the comparable period in 1979. At the same time, the number of deaths in the first six months of 1980, 36,920, was more than the 36,374 deaths in the same period of 1979. Out-migration from the major Michigan metropolitan areas is expected to increase from the current annual rate of 30,000 per year to 45,000 between 1980 and 1981. Thus, although the number of live births will exceed deaths, this will be offset by an increase in out-migration, resulting in a decrease in the share of the U.S. population living in Michigan to 4 percent. Taking these conditions into account, Michigan's population will be about 9.26 million by July, 1981, about the same as the April 1, 1980 preliminary population count.

Shifts in population from metropolitan to nonmetropolitan areas will continue in 1981. Due to high fuel costs, people may seek recreation areas close to home. The nonmetropolitan areas within the state and adjacent to major urban centers will continue to grow. However, the larger cities in metropolitan areas are expected to continue to lose population at a faster rate because economic growth is likely to be sluggish throughout 1981.

STATE AND REGIONAL COMPARISONS

1980 Developments

The changes in Michigan's total and per capita personal income, employment, and unemployment rate indicate that Michigan was hit harder by the 1979-1980 recession than any other state. Although unemployment increased in most states the recession was largely confined to the industrial states in the Midwest and Northeast. Most states in the South and West were largely unscathed by the economic downturn. The major reason for this is that the recession had a devastating impact on durable goods manufacturing, particularly autos and steel, and these industries are large employers in the Midwest and Northeast. (See Table 20.) The economies of the South and West are more diversified and depend more on the energy, high-technology, and defense sectors for employment — industries relatively unaffected by the recession.

TABLE 16
Personal Income in Selected States, 1978, 1979, and First Half 1979 and 1980
(Seasonally adjusted in billions)

State	1978	1979	Percent Change	Jan.-June 1979	Jan.-June 1980	Percent Change
California	$ 198.6	$ 228.0	14.8	$ 220.5	$ 247.8	12.4
Florida	65.9	75.7	14.9	73.2	82.9	13.3
Illinois	99.9	110.0	10.1	107.9	117.2	8.6
Indiana	41.5	46.3	11.6	45.6	48.4	6.1
MICHIGAN	78.2	86.6	10.7	85.9	89.0	3.6
New York	145.4	160.7	10.5	156.4	173.3	10.8
Ohio	84.1	93.5	11.2	91.7	98.4	7.3
Pennsylvania	90.2	100.4	11.3	97.7	107.3	9.8
Texas	101.5	117.6	15.9	113.2	129.6	14.5
Wisconsin	35.4	40.0	13.0	39.0	42.7	9.5
United States	1,713.9	1,930.7	12.6	1,877.5	2,077.7	10.7

Source: *Survey of Current Business*, U.S. Department of Commerce, Bureau of Economic Analysis, August 1980.

TABLE 17
Personal Income by Region,
1978, 1979, and First Half 1979 and 1980
(Seasonally adjusted in billions)

State	1978	1979	Percent Change	Jan.-June 1979	Jan.-June 1980	Percent Change
Far West	$ 257.4	$ 295.5	14.8	$ 285.8	$ 321.2	12.4
GREAT LAKES	339.0	376.4	11.0	370.0	395.7	6.9
Mideast	346.5	383.6	10.7	373.3	412.3	10.4
New England	97.6	109.5	12.2	106.3	119.6	12.5
Plains	130.1	147.7	13.5	143.7	156.7	9.0
Rocky Mts.	45.9	52.5	14.4	50.7	57.3	13.0
Southeast	337.4	380.4	12.7	369.6	411.7	11.4
Southwest	148.2	172.2	16.2	165.7	189.6	14.4
United States	1,713.9	1,930.7	12.6	1,877.5	2,077.7	10.7

Source: *Survey of Current Business*, U.S. Department of Commerce, Bureau of Economic Analysis, August 1980.

Michigan's personal income grew by 10.7 percent from 1978 to 1979. More recent statistics indicate that growth fell to a low of 3.6 percent when comparing the first half of 1979 to the first half of 1980.

Personal income grew more slowly in the Great lakes region than in other regions between 1978 and 1979. As shown in Table 17, the Southwest, Far West, and Rocky Mountain regions grew at a faster rate than the Mideast and Great Lakes regions. The growth rate for the Southeast, Plains, and New England regions hovered near the national average.

In 1979, Michigan's per capita personal income increased 10.4 percent above the 1978 level. Although this rate of growth was smaller than the national growth rate of 11.7 percent, Michigan per capita income was 7 percent above the national average.

Long-run regional trends in per capita personal income are shown graphically in the 1980 *Economic Report*. In 1929, per capita income was 30 to 40 percent higher than the national average in the Mideast, Far West, and New England regions while the Southwest, Southeast, and Plains regions were 50 to 60 percent below the U.S. average. Over time, this wide divergence has narrowed toward the national average. In 1979, the gap between the highest and lowest region was only 26 percentage points.

Current statistics indicate that the growth in per capita personal income for the Great Lakes has slowed while the Southeast and Southwest regions have been catching up. As illustrated in Table 19, the Great Lakes per capita personal income as a percentage of the

TABLE 18
Per Capita Personal Income, Selected States, 1978 and 1979

State	1978	1979	Percent Change	Percent of National Average 1978	Percent of National Average 1979
California	$8,900	$10,047	12.9	113	115
Florida	7,605	8,546	12.4	97	97
Illinois	8,887	9,799	10.3	113	112
Indiana	7,701	8,570	11.3	98	98
MICHIGAN	8,514	9,403	10.4	108	107
New York	8,192	9,104	11.1	104	104
Ohio	7,836	8,715	11.2	100	99
Pennsylvania	7,669	8,558	11.6	98	98
Texas	7,776	8,788	13.0	99	100
Wisconsin	7,555	8,484	12.3	96	97
United States	7,854	8,773	11.7	100	100

Source: *Survey of Current Business*, U.S. Department of Commerce, Bureau of Economic Analysis, August 1980.

TABLE 19
Per Capita Personal Income by Region, 1978 and 1979

Region	1978	1979	Percent Change	Percent of National Average 1978	Percent of National Average 1979
Far West	$8,807	$9,901	12.4	112	113
GREAT LAKES	8,224	9,118	10.9	105	104
Mideast	8,206	9,112	11.0	104	104
New England	7,956	8,910	12.0	101	102
Plains	7,637	8,628	13.0	97	98
Rocky Mountain	7,512	8,357	11.2	96	95
Southeast	6,836	7,624	11.5	87	87
Southwest	7,608	8,627	13.4	97	98
United States	7,854	8,773	11.7	100	100

Source: *Survey of Current Business*, U.S. Department of Commerce, Bureau of Economic Analysis, August 1980.

national average dropped by one percentage point in 1979. Conversely, per capita income in the Southwest increased by one percentage point. This phenomenon can partially be explained by the fact that these regions receive more in federal government expenditures than they pay in federal taxes. The opposite is true for the Midwest and Northeast regions. States in these regions receive less from the federal government than they pay in taxes. In addition, the Northeast and Midwest grow only during prosperous times; however, other regions grow even during periods of recession.

In 1980, Michigan's employment declined by 5 percent. Among the states selected in Table 20, every state except Florida and Texas suffered a reduction in employment. During the same period, the largest employment declines, next to Michigan, were recorded in Ohio, Pennsylvania, and Illinois.

Michigan is a state with cyclically high unemployment due largely to changes in the auto industry. In 1979, nearly 39.6 percent of all U.S. motor vehicle employment was located in Michigan. Statistics shown in Table 20 illustrate that Michigan's 1980 unemployment rate reached 12.4 percent. This rate is 4.8 percentage points over the national rate of 7.6 percent. In contrast, unemployment in Texas, Wisconsin, California, Florida, and New York was below the national average. Although New York and Wisconsin are mature industrial states, unemployment there was relatively low, in part, because they employ only 4.3 and 3.4 percent, respectively, of U.S. motor vehicle employment. Texas and California had low rates because the recession had the least adverse effect on their employment in sectors such as energy, high-technology, and aerospace.

1981 Outlook

Michigan and the Great Lakes region will continue to lag behind the national growth rate and the growth rates of the states in the South and West in 1981. Michigan personal income will increase at only a slightly slower pace than U.S. personal income, but the unemployment rate will remain well above the U.S. average. In the second half of 1981, as the automobile industry strengthens and the Michigan economy improves from very depressed levels, it is likely that employment and income growth will outstrip growth at the national level and in many other states.

Over the longer term, Michigan economic growth will continue to lag behind the growth rates of states in the South and West and unemployment will remain well above the national average. Michigan will continue to be more susceptible to economic downturns until progress is made in reducing the heavy dependence on durable goods manufacturing and in providing a greater diversity of employment opportunities in more growth-oriented industries.

TABLE 20
Employment and Unemployment Rates in Selected States, 1979 and 1980
(Thousands)

State	October, 1979		October, 1980		Percent Change in Employment	Percentage Point Change in Unemployment rate	Percent Change in Manuf. Emp.	Percent Employed in Manuf.
	Employment[1]	Unemployment rate	Employment[1]	Unemployment rate				
California	9,772.1	5.8	9,755.3	6.7	-0.2	0.9	-2.4	20.4
Florida	3,409.7	6.3	3,543.8	6.8	3.9	0.5	0.2	12.5
Illinois	4,874.3	5.5	4,799.2	8.8	-1.5	3.3	-4.9	24.6
Indiana	2,242.3	6.2	2,240.1	8.6	-0.1	2.4	-4.7	30.6
MICHIGAN	3,645.3	7.3	3,502.3	12.1	-3.9	4.8	-10.2	28.8
New York	7,243.4	7.1	7,190.1	7.3	-0.7	0.2	-3.5	20.4
Ohio	4,543.4	5.9	4,434.9	8.1	-2.4	2.2	-8.9	28.2
Pennsylvania	4,896.8	7.9	4,788.5	7.7	-2.2	0.2	-5.8	27.4
Texas	5,707.2	3.8	5,894.7	4.4	3.3	0.6	0.9	17.8
Wisconsin	2,020.7	3.8	2,001.3	6.3	-1.0	2.5	-8.5	27.6
United States[2]	91,062.0	5.9	91,232.0	7.6	0.2	1.7	-4.3	22.2

[1]Non-agricultural.

[2]Seasonally adjusted.

Source: *Employment and Earnings*, U.S. Department of Labor, Bureau of Labor Statistics, December, 1980. *News*, U.S. Department of Labor, Bureau of Labor Statistics, October, and December, 1980.

MICHIGAN SECTOR ANALYSIS

- Motor Vehicle and Equipment Industry
- Energy
- Finance
- Construction
- Agriculture
- Mineral Supplies and Mining
- Transportation
- Tourism
- International Trade

MOTOR VEHICLE AND EQUIPMENT INDUSTRY

1980 Developments

An economic environment characterized by record-high inflation and interest rates coupled with federal credit controls plunged the motor vehicle sector into a steep slide in 1980. While U.S. production of motor vehicles declined 30.2 percent, Michigan production dropped 38.7 percent as a result of a production mix weighted with large cars and trucks. The devastating performance in motor vehicle production reflected sales which plummeted 18.9 percent. In addition, imports accounted for a record 26.7 percent of passenger car sales and 19.5 percent of truck sales.

U.S. Production and Sales

The growth trends of both motor vehicle production and sales had already slowed considerably by the start of 1980. The peak levels of activity in 1978 were toppled in 1979 as the Iranian oil cutback, gasoline shortage, and rising fuel prices accelerated the shift towards smaller, fuel-efficient products. Rising prices in general curtailed the real purchasing power of consumers which brought about a disproportionate reduction in the purchase of durable goods, especially domestic cars and trucks. In recognition of these trends production levels were reduced significantly during the early months of 1980; however, sales continued to fall well below expectations.

In January, the inventory level of domestic passenger cars swelled to 71 days (60-65 days are normal). In an effort to reduce inventories, production was slowed and promotional campaigns were launched to boost sales. The marketing effort inflated sales for the first quarter to a seasonally adjusted annual rate (SAAR) of 10.3 million units. Nevertheless, inventories continued to accumulate as further deterioration in the economy and the imposition of credit controls in March eroded consumer spending. Moreover, the rebates and other sales incentives utilized in the first quarter served to lower sales in the second quarter because consumers advanced purchases to take advantage of the special programs. Total sales in the second quarter fell to 7.6 million units (SAAR). But inventories continued to mount as the domestic supply reached 76 days. Sales hit bottom in May with domestic units totaling 5.2 million units (SAAR) and imports totaling 1.9 million units. The import share of the market continued to rise, reaching 26.5 percent in May.

As a result of the dismal sales record for domestic passenger cars and trucks during the first half of the year, production declined markedly. Passenger car and truck production was down 29.5 percent

and 56 percent, respectively. During the second half of the year, sales and production were buoyed by the removal of credit controls and an improving economy.

For the year, motor vehicle production declined 30.2 percent to 8 million units. Passenger car production totaled 6.4 million units, a decline of 24.4 percent from 1979. Truck production registered an even sharper fall of 46.4 percent with production of 1.6 million units. Total motor vehicle production was nearly 38 percent below the level established in 1978. Additional production detail is presented in Table 21.

While motor vehicle sales declined in general, the sale of both import cars and trucks rose as the greater fuel efficiency of these products were preferred over domestic products and the traditional import buyers were less affected by the recessionary ills.

Motor vehicle sales totaled 11.5 million units with passenger car and truck sales summing to 9 million units and 2.5 million units, respectively. Passenger car sales fell 15.8 percent compared with a 28.5 percent decline in truck sales. More importantly, domestic passenger sales decreased 21 percent whereas domestic truck sales were off 33.5 percent.

TABLE 21
U.S. Motor Vehicle Production and Sales, 1978-1981
(Thousands)

	Calendar Years				Model Year
	1978	1979	1980	1981[1]	1981[1]
Production	12,899	11,481	8,008	9,220	8,950
Passenger Cars	9,177	8,434	6,375	7,040	6,900
Trucks	3,722	3,047	1,633	2,180	2,050
Sales	15,418	14,131	11,460	12,080	11,800
Passenger Cars	11,308	10,651	8,973	9,520	9,300
Domestic	9,308	8,325	6,578	7,100	6,860
Import	2,000	2,236	2,395	2,420	2,440
Trucks	4,110	3,480	2,487	2,560	2,500
Domestic	3,773	3,010	2,002	2,150	2,050
Import	337	470	485	410	450

[1] Estimate by Michigan Department of Management and Budget.

Sources: *Motor Vehicle Production Reports* and *Motor Vehicle Facts and Figures*, Motor Vehicle Manufacturers Association of the U.S., Inc., selected issues. *Automotive News*, Crain Automotive Group, Inc., selected issues.

TABLE 22
U.S. Motor Vehicle Sales Mix, 1979-1980
(Thousands)

	Calendar Years			
	1979		1980	
	Units	Percent	Units	Percent
Passenger Cars	10,641	100.0	8,973	100.0
Subcompact	1,368	12.9	1,383	15.4
Compact	2,223	20.9	1,881	21.0
Intermediate	2,532	23.8	1,918	21.4
Full-Size	2,193	20.6	1,396	15.5
Import	2,325	21.8	2,395	26.7
Trucks	3,480	100.0	2,487	100.0
Light Duty	2,635	75.7	1,734	69.7
Medium Duty	152	4.4	92	3.7
Heavy Duty	224	6.4	176	7.1
Import	469	13.5	485	19.5

Source: *Automotive News*, Crain Automotive Group, Inc., selected issues; *Ward's Automotive Report's*, Wards Communications, Inc., selected issues.

In contrast, import car sales rose 7.1 percent compared with a 3.2 percent increase in import truck sales. The import share of the passenger car market jumped to 26.7 percent in 1980 from 21 percent in 1979. Similarly, import trucks captured 19.5 percent of the market, which was up from 13.5 percent in 1979.

This significant shift to imports and smaller passenger cars in general is documented in Table 22. Both the intermediate and full-size segments of the passenger car market lost ground in 1980. The loss in the full-size segment was over 5 percentage points while the intermediate segment lost 2.4 percentage points. Also of interest is the 2.5 percentage point gain in market share of the subcompact segment. Table 22 also presents a comparison of the truck market segmentation in 1979 and 1980.

Michigan Production

Motor vehicle production in Michigan was more adversely affected by the dramatic shift to smaller passenger cars and the unfavorable economic climate. At the outset of 1980, Michigan shouldered a disproportionate share of the burden and the burden increased as the year unfolded.

TABLE 23
Michigan Motor Vehicle Production, 1978-1981
(Thousands)

	Calendar Years				Model Year
	1978	1979	1980	1981[1]	1981[1]
Production					
Passenger Cars	2,631	2,527	1,726	2,150	2,070
Percent of U.S.	28.7	30.0	27.1	30.5	30.0
Trucks	1,306	996	433	550	526
Percent of U.S.	35.1	32.7	26.5	25.2	25.5
Total	3,937	3,523	2,159	2,700	2,596
Percent of U.S.	30.5	30.7	27.0	29.3	29.0

[1] Estimated by Michigan Department of Management and Budget.

Source: *Michigan State Economic Record*, Michigan State University, Graduate School of Business Administration, selected issues.

In January, 1980, the inventory of passenger cars with Michigan production facilities was equal to a 73 days' supply compared with an industry-wide level of 71 days. By April, 1980 Michigan products had an 89 days' supply compared with a 76 days' supply for the industry. This pattern mandated almost continual production cutbacks at Michigan plants. During the first quarter, Michigan's share of motor vehicle production slipped to 27.8 percent. In the second quarter, Michigan's share ebbed to 25.4 percent.

Overall, Michigan's share of U.S. motor vehicle production declined to 27 percent in 1980, compared with 30.7 percent in 1979, and 30.5 percent in 1978. Michigan production declined 38.7 percent in 1980 to 2.2 million units, the lowest level since 1961. Michigan production of passenger cars fell 31.7 percent to 1.7 million units, 27.1 percent of the U.S. total. Truck production in Michigan plunged 56.5 percent to 933,000 units. Michigan's share of truck production was 26.5 percent compared with 32.7 percent in 1979 and 35.1 percent in 1978. Additional Michigan production detail is presented in Table 23.

The severity of the decline in Michigan passenger car and truck production in 1980 was partly due to the mix of products assembled in the state. Using the products that comprised the 1979 model year as a benchmark, Table 24 illustrates that the mix of passenger cars was heavily weighted toward large cars. Over 45 percent of total car production in the state was in full-size products. The combined share of full-size cars and trucks represented over 62 percent of total

production in Michigan. The shifts in the mix presented in Table 24 reflect the significant production decline at Michigan plants which reduced both the full-size car and truck shares by about 10 percentage points each. This shift was the result of both the general sales decline in the motor vehicle market and the shift to imports and smaller cars. The nearly 5 percentage point gain in the compact segment was directly related to the production of General Motors X cars within the state.

1981 Outlook

A moderate and sustained economic recovery beginning in the latter half of 1981 is expected to benefit the motor vehicle sector. In addition, the introduction of new, fuel-efficient, front-wheel drive products will also aid the industry in continuing the rebound from the depths reached in 1980. However, imports are expected to continue to capture about 26 percent of the domestic car market.

As noted in Table 21, motor vehicle sales are expected to rise 5.4 percent to 12.1 million units. The passenger car market is expected to improve 6.1 percent to 9.5 million units while the truck market is expected to reach 2.6 million sales. Domestic passenger car sales are expected to exhibit the strongest growth with nearly an 8 percent

TABLE 24
Michigan Motor Vehicle Production Mix, 1979-1981
(percent)

	Model Years		
	1979	1980	1981[1]
Passenger Cars			
Subcompact	0.0	0.0	11.3
Compact	35.7	40.4	37.5
Intermediate	18.7	24.9	18.5
Full-Size	45.6	34.7	32.7
Total Cars	100.0	100.0	100.0
Motor Vehicles			
Passenger Cars	69.6	78.2	80.0
Trucks	30.4	21.8	20.0
Total Motor Vehicles	100.0	100.0	100.0

[1] Estimates.

Source: Michigan Department of Management and Budget.

increase to 7.1 million units. This is due to the improving economy which is expected to have a relatively greater effect on the traditional domestic buyer and the new domestic products.

Motor vehicle production is expected to mirror these sales gains with a production increase of over one million units to 9.2 million units. However, the expected 1981 level will be about 3.7 million units below 1978 production levels.

Michigan is expected to benefit significantly from the improvement in the domestic market and the important shift in the state's production mix. In 1980, Michigan production is expected to increase 25 percent as the state recoups a portion of the nation's production it lost during 1980. Total production of 2.7 million units is expected to account for 29.3 percent of the U.S. total. Passenger car production gains are expected to be greater with production of 2.2 million units, representing 30.5 percent of the U.S. total. Although the state's truck production is expected to increase 27 percent, the state's share of U.S.

TABLE 25
Michigan Passenger Car Plants, Model Year 1981

Manufacturer/ Product	Location	Percent of U.S. Production
Chrysler	Michigan	35.4
Reliant, Aires	Detroit	50.0
Chrysler, Fury, St. Regis	Detroit	100.0
Ford	Michigan	37.5
Mustang, Capri	Dearborn	85.7
Escort, Lynx	Wayne	57.6
Lincoln, Mark IV	Wixom	100.0
General Motors	Michigan	29.1
Cadillac DeVille	Detroit	100.0
Century, Regal	Flint	39.9
LaSabre, Electra	Flint	69.8
Cutlass	Lansing	23.8
Oldsmobile 88, 98	Lansing	90.1
LeMans, Grand Prix	Pontiac	82.3
Omega, Skylark, Citation	Willow Run	40.5
Checker	Michigan	100.0
Checker	Kalamazoo	100.0

Source: Michigan Department of Management and Budget.

TABLE 26
Michigan Truck Plants, Model Year 1981

Manufacturer/ Product	Location	Percent of U.S. Production
Chrysler	Michigan	100.0
Light duty	Warren	100.0
Ford	Michigan	12.2
Light Duty	Wayne	12.2
General Motors	Michigan	38.0
Lt., Med., Hv. Duty	Pontiac	9.5
Light Duty	Flint	26.7
Light Duty	Detroit	1.8

Source: Michigan Department of Management and Budget.

truck production is expected to decline over a full percentage point. The detail of the production forecast is contained in Table 23.

The vast improvement in Michigan motor vehicle production in 1981, relative to 1980 , is evidenced in the product mix for the 1981 model year. Over 11 percent of Michigan car production is expected to be the subcompact Ford Escort/Lynx. The production of Chrysler K cars and General Motors X cars are expected to yield a 37.5 percent share for the compact segment. With the start-up of production for these models in model year 1981, it is expected that almost half of Michigan's passenger car production will be new, fuel-efficient subcompact and compact cars. Also noteworthy from Table 24 is the truck share of production which is expected to be 20 percent of Michigan motor vehicle production in 1981.

Table 25 and Table 26 detail Michigan production by company product and plant location. Chrysler and Ford plants in the state are expected to produce over one-third of their U.S. passenger cars compared with under one-third for General Motors. With respect to trucks, Chrysler is expected to produce all their trucks in the state while Ford is expected to produce about 12 percent. General Motors is expected to produce about 38 percent of their trucks in Michigan.

ENERGY

1980 Developments

Michigan energy supplies remained adequate and energy production was well under capacity as energy demand weakened in 1980. The two key developments during the year were declining demand and rising prices.

The economic slowdown resulted in a significant reduction in energy demand primarily in the industrial sector, although, as shown in Table 27, gas and electric companies did increase the number of customers served in 1980. Public utility revenues posted strong increases due to significantly increased prices, even though consumption declined.

Total world crude oil prices rose sharply from $13.77 on January 1, 1979 to $28.55 on January 1, 1980. By January 1, 1981, the total world crude oil price was up to $34.47 — 150 percent over the 1979 average. In November, 1980, speculation drove spot crude oil prices to a record $42 to $44 per barrel. Subsequently, prices fell, as OPEC export volume increased. In December, 1980, the official price of the benchmark Saudi Arabian crude was raised to $32 per barrel and a new official price "ceiling" of $41 per barrel was imposed. Meanwhile, Libya increased its barrel price to $40.78. As domestic oil production and conservation measures increased, oil imports declined in 1980.

Crude oil price hikes rapidly fed in to the economy. As measured by the Detroit Consumer Price Index, fuel oil, coal, and bottled gas prices increased the most, rising 36.9 percent over 1979. Piped gas and electricity prices increased 15.3 percent in 1980. The total energy price index increased 27.9 percent in 1980, due, in large part, to the price increases on home-heating fuels and auto fuels.

Further discussion on fuel prices and other 1980 developments are highlighted in the following paragraphs. The accompanying illustration shows the distribution of energy sources used in various consumption categories.

Natural Gas

A severe slowdown in the economy resulted in a nearly 2 percent drop in natural gas sales for 1980. Most of the reduction is attributable to reduced industrial production and therefore declining consumption of total natural gas supplies. Due to the relative price attractiveness of natural gas, there continued to be a small amount of conversion from fuel oil to natural gas consumption in the residential sector. Offsetting this movement was some industrial shifting to more abundant coal and also #6 fuel oil.

TABLE 27
Energy Sales and Customers in Michigan, 1979 and 1980[1]
(Millions)[2]

	1979	1980[3]	Percent Change
Electric Companies			
Electric Power Sales (Kilowatt-hours)	63,688	59,754	-6.2
Generating capacity (Kilowatts)	15.5	15.5	---
Net Plant Investment	$ 8,395	$ 9,276	10.5
Customers (Thousands)	3,072	3,092	0.6
Gas Companies			
Gas Energy Sales (Cubic feet)	780,137	767,614	-1.6
Estimated Reserves (Cubic feet)	1,700,000	1,650,000	-2.9
Net Plant Investment	$ 1,665	$ 1,721	3.4
Customers (Thousands)	2,143	2,195	2.4
Telephone Companies			
Total Telephones (Thousands)	7,018	7,086	1.0
Net Plant Investment	$ 3,655	$ 3,954	8.2

[1]Figures are based on Michigan's two largest electric providers (Consumers Power Company and The Detroit Edison Company), the State's two largest gas service providers (Michigan Consolidated Gas Company and Consumers Power Company), and Michigan's two largest suppliers of telephone service (Michigan Bell Telephone Company and General Telephone Company of Michigan). These companies account for approximately 92 percent of Michigan's total electric service, 90 percent of its total gas service and nearly 95 percent of the State's telephone service.

[2]Unless otherwise indicated.

[3]Estimate.

Source: Michigan Department of Commerce, Public Service Commission.

As conservation continues, the share of Michigan's production of natural gas increases relative to total production, thereby reducing the state's reliance on imported gas supplies. Federal pricing policies, however, are effectively increasing the consumer's cost of "new oil" production as "old" lower priced reserves are being depleted. On average, the national price increase of natural gas in 1980 approached 20 percent.

Based on an annual consumption rate of 175 million cubic feet, the average customer of Consumers Power Company had a $33 average bill hike to $549 in January, 1981. Higher gas costs increased Michigan Consolidated's average residential bill for the same period by $120 to $657. Although total consumption declined in 1980, total gas utility revenues increased nearly 21 percent due to these higher supply costs, which were passed on to the natural gas consumer. (See Table 27.)

Fuel Oil

High inventories, reduced demand, and a mild 1980 winter assured a more-than-adequate supply of fuel oil for the year. In addition, a shift away from fuel oil consumption and increased conservation reduced demand for fuel oil deliveries in 1980.

Fuel oil prices have risen dramatically, following the trend of the spot market price for crude oil. The average retail price of #2 fuel oil in Detroit increased 39 percent to just over one dollar in 1980. The average price was only 50 cents per gallon in 1978. By January, 1981, the average residential cost of #2 heating oil exceeded $1.11 per gallon.

Electricity

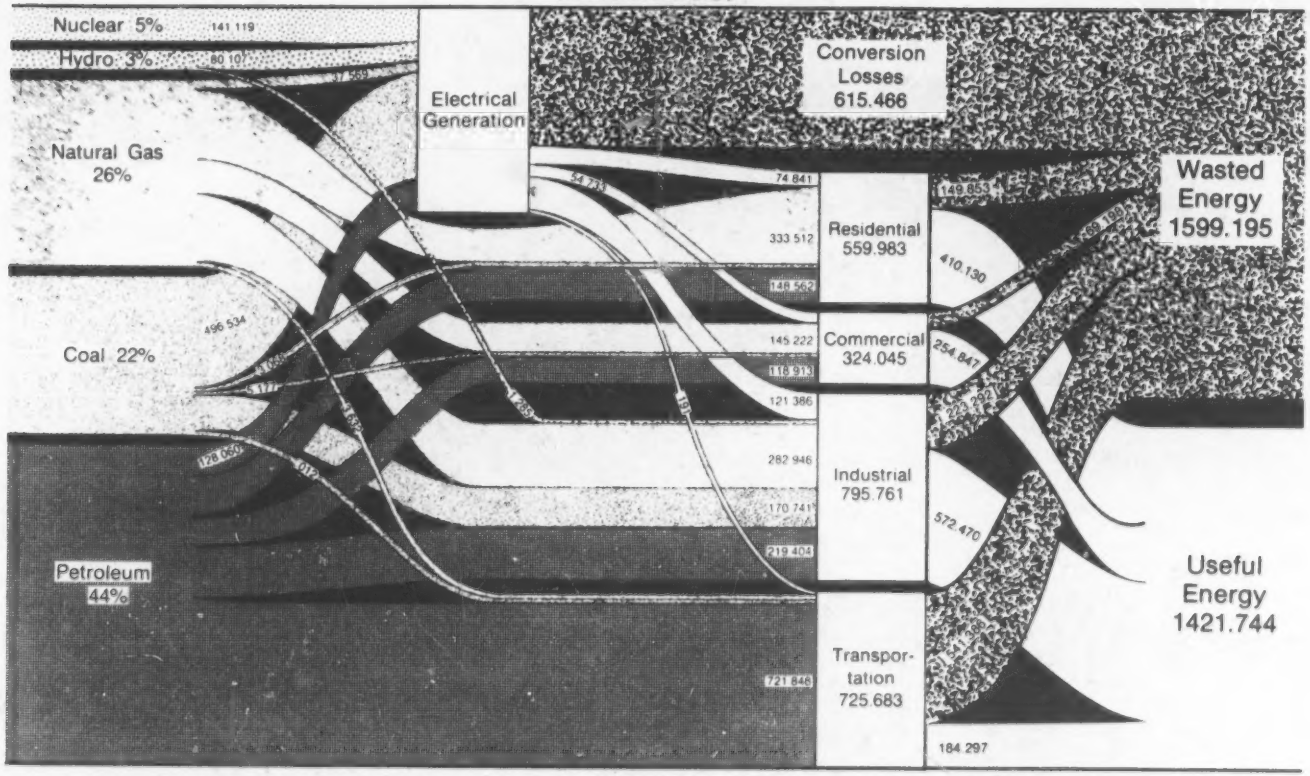
Electricity generation during 1980 easily met the declining demand, which also occurred with other energy sources. Electric power sales dropped more than 6 percent in 1980 although there was a very small addition of customers. Offsetting the reduction in demand (primarily in industrial consumption due to production slowdowns) was a sharp increase in electric prices -- 16.4 percent on average in the U.S.

Electricity remains the most expensive means of heating a residential home and generates the greatest loss of energy in conversion of fuel to electrical generation.

Coal

Increased fuel prices for electrical generation in 1980 reflect greater use of higher cost low-sulpher coals to comply with environmental requirements, a United Mine Worker (UMW) contract wage increase, mine reclamation costs, and increased coal freight rate increases. Throughout 1980, coal inventories remained strong due to reduced electrical generation, a decline in industrial consumption, and

CHART 4
Michigan Energy Flow, 1978
(Trillion BTU)



Source: *State Energy Data Report*, U.S. Department of Energy, Energy Information Administration, April, 1980. Michigan Department of Commerce, Energy Administration.

TABLE 28
Regulated Public Utility Revenues 1979 and 1980[1]
(Thousands)

	1979	1980[2]	Percent Change
Electric Revenues			
Residential Sales	$ 898,173	$1,018,543	13.4
Commercial Sales	633,086	715,590	13.0
Industrial Sales	1,060,554	1,100,802	3.8
Other Sales (Incl. Resale)	229,538	241,969	5.4
Total	$2,821,351	$3,076,904	9.1
Gas Revenues			
Residential Sales	$ 916,287	$1,108,547	21.0
Commercial Sales	440,155	534,257	21.4
Industrial Sales	586,088	581,363	-0.8
Other Sales (Incl. Resale)	31,015	158,064	509.6
Total	$1,973,545	$2,382,231	20.7
Telephone Revenues (Intra-State)			
Local Services	$ 939,112	$1,020,447	8.7
Tolls	507,562	551,943	8.7
Other	118,103	129,196	9.4
Uncollectible Operating Revenues	(18,908)	(25,055)	32.5
Total	$1,545,869	$1,676,531	8.5

[1]These figures are based on Michigan's two largest electric providers (Consumers Power Company and the Detroit Edison Company), the State's two largest gas service providers (Michigan Consolidated Gas Company and Consumers Power Company), and Michigan's two largest telephone service suppliers (Michigan Bell Telephone Company and General Telephone Company of Michigan). These companies account for approximately 92 percent of the total electric service, about 90 percent of the total gas service and nearly 95 percent of the total telephone service in Michgian.

[2]Estimate.

Source: Michigan Department of Commerce, Public Service Commission.

the fact that no significant labor or transportation disruptions occurred. Coal accounts for approximately two-thirds the source of Michigan's electric power and is expected to increase slightly as oil-fired burners are slowly replaced.

Automobile Gasoline

Automobile gasoline prices rose sharply during the first quarter of 1980, remained stable until summer when prices actually declined on average, and then began to rise again toward the end of the year. By the final week of 1980, the average price in Michigan for a gallon of regular gasoline was $1.29, up 17.3 percent from 1979. Unleaded fuel, which accounted for over half of total consumption, increased over 16 percent from $1.15 in late December, 1979 to $1.34 in 1980.

Gasoline consumption fell about 11 percent in 1980 as smaller and more fuel-efficient automobiles were added to the total transportation pool. This was due, in part, to a 5.2 percent decline in the number of miles driven in Michigan. Most of the reduction in gasoline consumption was due to price-induced conservation, whereas the reduced consumption of earlier years was caused to a greater extent by supply shortfalls.

Gasoline production has been reduced significantly and supplies were strong throughout 1980. Existing production capacity, however, is sufficient to meet any future increases in consumption.

1981 Outlook

The major factor contributing to uncertainty in the energy sector in 1981 is the Iran-Iraq war. About 40 percent of Michigan's petroleum needs are satisfied by imports. A prolonged conflict in the Middle East could disrupt energy inventories thereby resulting in some shortages, particularly if demand increases significantly. The probability of a severe shortage before the winter of 1981-1982 is low, however, due to large crude oil stocks.

Coupled with the uncertainty of import production levels are assured price increases. Federal decontrol of crude oil prices will further increase fuel oil and gasoline prices by several cents per gallon before the end of 1981.

As the economy strengthens in the second half of 1981, it is expected that segments of industrial energy demand will increase; however, no shortages are anticipated due to healthy inventory levels and a relatively depressed level of overall demand.

Although the winter of 1981 was colder than normal, increased sales, relative to the winter of 1980, posed no problem for supply. A potential problem is the UMW contract renewal which could result in a strike in March. As coal is the major source of electrical generation and summer is the peak usage period, a coal strike could result in problems in the summer months.

Unleaded gasoline consumption will continue to increase in relation to regular gasoline sales and gasohol purchases will increase due to a reduced state tax rate levied on the fuel. Due to uncertainty of when the Iran-Iraq conflict may end, but given domestic decontrol of crude oil prices which occurred in January, 1981, it is difficult to estimate the level of gasoline prices in 1981. However, it is expected that regular gasoline prices will increase by at least 15 percent by the end of 1981 to $1.50 per gallon, on average. Electric prices are expected to increase about 13 percent and natural gas about 16 percent in 1981.

Energy conservation will continue, although reduced consumption due to price increases will not greatly reduce purchases as many consumers have already taken significant measures to reduce energy consumption. Increased participation is anticipated in the many home-heating and tax credit programs provided for energy-related purchases. These programs will continue to result in increased usage of alternative energy systems such as solar-heating systems and wood-burning stoves.

FINANCE

1980 Developments

The financial markets were on a fast roller coaster in 1980. As the year began, the long-expected recession failed to materialize and inflationary expectations were running high. In response to strong loan demand and high rates of inflation in the first two months of the year, interest rates rose sharply, reaching record levels.

In mid-March, the Federal Reserve Board (Fed) took steps to restrain credit demands and reduce inflationary pressures by adopting stringent measures designed to increase the cost and reduce the availability of credit. The response to these measures was even sharper than the Fed expected as an already weak economy was pushed over the edge and the second quarter decline in real GNP was the sharpest in the post-war period. As a result of reduced credit demands and a temporary reduction in inflationary expectations, interest rates experienced the fastest and most severe decline in history during the April to June period.

Interest rates did not stay at these low levels for long and were rising sharply by August in response to renewed growth in money and credit and renewed concerns about inflation and the federal deficit. Interest rates continued to rise sharply until year end as the economy rebounded from the disastrous second quarter and hopes for a significant reduction in inflation faded. By mid-December most short- and long-term interest rates had more than retraced the spring declines and were reaching new highs.

The extreme volatility of the financial markets in 1980 caused serious economic problems particularly for the housing, bond, and foreign exchange markets. This is because financial decision makers, treasurers and foreign exchange markets respond to interest rates, not monetary aggregates. The reason for this instability can be traced, in part, to the Fed's new policy (adopted in October, 1979) of attempting to control the monetary aggregates rather than the level of interest rates. Specifically, the increased volatility of interest rates is caused by two factors: 1) interest rates absorb more of the impact of changes in short-term credit demands than previously and; 2) financial markets attempt to outguess the Fed by anticipating policy changes. Recent increases in interest rates have been larger than are justified by economic conditions or credit demands because the market anticipated the Fed would attempt to reduce reserves to slow the growth in the money supply. Market anticipation or expectation work on interest rates as follows. When interest rates are expected to rise, lenders withhold funds from fixed-term commitments because they expect to be able to lend these funds more profitably later. Borrowers, concurrently, increase their demand for such credit because they

TABLE 29
U.S. Money Stock, 1979 and 1980[1]
(Annual Percentage Rates of Change, Seasonally Adjusted)[2]

	M1-A	M1-B	Monetary Base
1979			
I	0.2	4.8	4.5
II	7.8	10.7	4.7
III	8.8	10.1	12.1
IV	4.7	5.3	10.1
Annual Average	5.1	7.4	8.1
1980			
I	3.7	5.0	7.5
II	-1.9	-0.3	5.6
III	13.4	16.4	1.5
IV	1.1	4.9	-0.2[3]
Annual Average	4.1	6.6	3.6[3]

[1]The money stock is displayed here in three components: M1-A, currency and coin plus commercial bank demand deposits held by the nonbank public, excluding those held by foreign banks and official institutions; M1-B, M1-A plus other checkable deposits at all depository institutions; and the monetary base, member bank reserves, currency in circulation, and vault cash of nonmember banks.

[2]Percentage changes calculated between last months of period. For example, the fourth quarter rate is the increase from September to December.

[3]Estimated.

Source: *Federal Reserve Bulletin*, Federal Reserve System, Board of Governors, selected issues, 1980; *Economic Indicators*, Council of Economic Advisors, December, 1980.

anticipate higher financing costs later. The combination of lower supply and higher demand results in an increase in interest rates, the price of credit.

Another problem created by volatile interest rates is that there is more variability in the consumer price index because of swings in mortgage rates. This causes an unhealthy cycle where high interest rates raise inflation which leads to credit tightening causing still higher interest rates and another round of inflation.

Monetary Policy

As indicated above, the Federal Reserve Board's actions in 1980 followed an erratic course. In the first quarter, the growth in the money supply as measured by M1-B was 5 percent, well within the target range established by the Fed and about the same as the growth in the previous quarter. However, money growth in the early part of the quarter was above the targets as the economy remained relatively strong and business loan demand increased sharply after a slowdown in the previous quarter. The expansion of money and credit slowed in March as the Fed abruptly changed course in an effort to restrain credit demands and reduce inflationary pressures. (See Table 29.)

The credit restraint program adopted in mid-March by the Federal Reserve Board included the following actions: 1) under the voluntary special credit restraint program, financial institutions were asked to keep loan growth during 1980 below 9 percent. However, lenders were asked to meet basic credit needs of small businesses, farmers and other local customers with little access to alternate funds; 2) the base from which large member banks measure increases in their managed liabilities was reduced and the reserve requirement on this margin was increased from 8 percent to 10 percent; 3) large nonmember banks were directed to hold noninterest bearing special deposits with the Fed equal to 10 percent of increases in managed liabilities above the current level; 4) a surcharge of 3 percentage points was applied to frequent borrowings from the discount window by large banks; 5) a special deposit requirement of 15 percent was imposed on increases above base-period levels in credit cards, unsecured personal loans and other types of credit when proceeds were not used to finance the collateral; and 6) money-market mutual funds were directed to establish special deposits at Federal Reserve banks equal to 15 percent of new deposits after March 14.

The Fed's credit restraint program had a major impact on economic growth and on the monetary aggregates in the second quarter. Interest rates rose to record levels, real GNP declined precipitously, and business loan demand fell at an annual rate of 9.1 percent. (See Table 30.) Consumer installment credit declined 10.5 percent in the April to May period, the first decline since May 1975, and the largest fall in the post-war period. These developments contributed to a 0.3 percent decline in M1-B, at an annual rate. The impact on the economy was so immediate and extensive that the credit controls began to be phased out in May on the basis of evidence that excessive use of credit was no longer contributing to inflation. The discount rate was lowered one percentage point in May, June and July to a level of 10 percent.

There was a dramatic turnaround in the behavior of the monetary aggregates in the third quarter. M1-B increased at an annual rate of 16.4 percent, one of the largest quarterly gains on record. This rapid growth was due to the turnaround in economic activity, the sharp decline in interest rates, the rapid increase in prices and the completion of the phase-out of credit controls in July. The removal of

credit controls, lower interest rates and the increased economic activity stimulated business and household borrowing. Business loan demand increased more than 16 percent at an annual rate and consumer credit increased slightly after a sharp contraction in the second quarter.

The growth in the money supply (M1-B) continued at high rates in the early weeks of the fourth quarter as the economy continued to recover and business loan demand remained high. However, the Fed became concerned about the rapid growth of the money supply and allowed interest rates to reach record levels in an effort to slow the growth in the monetary aggregates. In mid-November, the high interest rates began to weaken economic activity, business loan demand weakened, and the money stock (M1-B) began to decline. The overall growth in M1-B in the fourth quarter was 4.9 percent, but there was a decline of 16.4 percent at an annual rate in the last seven weeks of 1980. The sharp slowdown in the growth of the money aggregates in the last several weeks of 1980 enabled the Fed to hold the growth in M1-B below the 5 percent target set in October for the September to December period.

TABLE 30
Business Loans at Commercial Banks, 1979 and 1980
(Annual Percentage Rates of Change, Seasonally Adjusted)[1]

Quarter	1979	1980
I	20.5	16.4
II	16.6	-9.1
III	22.7	14.3
IV	6.0	23.5[2]
Annual Average	17.5	11.5[2]

[1] Percentage changes calculated between last months of quarter.

[2] Estimate.

Source: *Federal Reserve Bulletin*, Federal Reserve System, Board of Governors, selected issues, 1980; *Economic Indicators*, Council of Economic Advisors, December, 1980.

For all of 1980, the Fed was able to come close to the growth targets set in July for the December, 1979 to December, 1980 period despite the large fluctuations during the year. (See Table 31.) The targets for M1-B were exceeded slightly because NOW and ATS accounts and money-market funds increased faster than expected, due in part to institutional changes.

TABLE 31
Comparison of 1980 Money Stock Growth Targets With Actual Money Stock Growth[1]
(Percent Change from December, 1979 to December, 1980)

	M1-A	M1-B	M-2	M-3
Target	3.5-6.0	4.0-6.0	6.0-9.0	6.5-9.5
Actual	4.1	6.6	10.1[2]	10.1[2]

[1]Targets set by Federal Open Market Committee at July meeting.

[2]Estimate.

Source: *Federal Reserve Bulletin*, Federal Reserve System, Board of Governors, selected issues, 1980.

One final 1980 development that should be mentioned is the enactment of the Depository Institutions Deregulation and Monetary Control Act of 1980 which had little impact on monetary policy in 1980 but will have a significant impact in the future. This new act provides for a phase-out of interest ceilings imposed by Regulation Q, expanded asset powers for financial institutions, and for nationwide use of NOW accounts and automatic transfers beginning January 1, 1981. The act also seeks to provide competitive equality between banks and thrift institutions offering nearly identical services but subject to different regulatory constraints.

Interest Rates

For the second consecutive year, short-term interest rates rose sharply, but the volatility of interest rates was the real story in 1980. Although most short-term interest rates increased sharply on an average basis in the fourth quarter of 1979 and the first quarter of 1980, there was little change in these rates from November, 1979 through mid-February, 1980. However, from the middle of February to the end of the quarter, three-month Treasury bills increased from about 12 percent to over 15 percent. The first quarter average of 13.5 percent for three-month Treasury bills was almost 400 basis points above the average for the third quarter of 1979. (See Table 32.)

Short-term interest rates peaked in late March and then declined sharply throughout most of the second quarter -- most short-term interest rates fell 7 to 10 percentage points by mid-June. Three-month Treasury bill rates fell from 15.5 percent to about 6.5 percent, averaging 10.1 percent for the second quarter. Prime commercial paper rates fell from a peak of 18 percent to 8 percent. The decline was due principally to the falloff in demand for credit associated with

the economic downturn and with the response of borrowers to the Fed's credit restraints. Other factors were the apparent reduction of inflationary expectations and the weakness of money growth relative to the 1980 target. The interest rate decline ended largely because of the growing federal deficit and discussions of a federal tax cut to stimulate economic activity.

Short-term interest rates began to rise sharply again early in the third quarter due to the renewed growth in money and credit and renewed concerns about inflation and the federal deficit. By early October, most short-term rates were about 4 percentage points above the June lows. Short-term rates continued to rise through mid-December with three-month Treasury bills peaking at about 16.8 percent and commercial paper rates peaking at almost 18.8 percent. At year's end, three-month Treasury bills were about 14.3 percent compared with 12 percent at the beginning of the year. Commercial paper rates ended the year at about 16 percent compared with approximately 11 percent at the year's beginning.

TABLE 32
Market Interest Rates, 1979 and 1980
(Percent)

	3-Month Treasury Bills	High-Grade Municipal Bonds	Corporate Aaa Bonds (Moody's)	Prime Comm. Paper 4-6 Months	New Home Mortgage Yields
1979					
I	9.36	6.20	9.29	10.10	10.23
II	9.37	6.08	9.39	9.85	10.50
III	9.63	6.18	9.29	10.60	10.94
IV	11.80	7.09	10.54	13.10	11.41
Average	10.04	6.39	9.63	10.91	10.77
1980					
I	13.47	8.11	12.14	14.25	12.14
II	10.05	7.79	11.20	10.75	13.12
III	9.24	8.55	11.58	9.65	12.36
IV	13.71	9.58	12.83	14.51	12.98
Average	11.55	8.51	11.94	12.29	12.65

Source: *Economic Indicators*, Council of Economic Advisors, November, 1980; *Macro-Economic Forecasts: 1980*, Chase Econometrics Associates, Inc., December, 1980 and January, 1981.

The discount rate was increased four times in 1980 and also lowered three times, beginning the year at 12 percent, rising to 13 percent in February, declining to a low of 10 percent in August and ending the year at 13 percent. The prime rate was increased an incredible 25 times in 1980 and was reduced 13 times, first reaching 20 percent in April, falling to a low of 11 percent, and peaking at 21.5 percent at year's end.

Long-term interest rates followed the same basic pattern as short-term rates. Triple-A corporate bond rates began the year at about 11 percent, rose to 13 percent in March, declined to 10.5 percent in June, peaked at 13.5 percent in mid-December and ended the year a little below 13 percent. Municipal bond rates also followed the same pattern, beginning the year at about 7.3 percent and ending the year at 10 percent. As in 1979, the increase in long-term rates can be attributed primarily to expectations of higher rates of inflation and strong credit demand.

Mortgage rates rose along with other interest rates in the first quarter and averaged 12.1 percent for the quarter. In an effort to shore up the housing market, which weakened as mortgage rates rose, the Federal Home Loan Board (FHLB) lowered the minimum liquidity requirement from 5.5 to 5 percent on April 1 and announced plans to increase dividends on FHLB stock to savings and loan associations. Federal savings and loans were also allowed to issue variable rate mortgages. The interest rate on mortgages rose to more than 16 percent in April and mortgage lending came to a virtual standstill in the second quarter. However, by July mortgage rates had declined to 12.3 percent, but increased to 13.5 percent by the end of the third quarter and ended the year at about 13 percent. These figures, however, understate the current level of mortgage rates as they lag commitments by two to three months. In Michigan, mortgage rates were about 13.5 percent in January, rose to more than 17 percent in late winter, fell to below 13 percent in June and averaged 14.8 percent in November.*

Savings Flows

The growth in time and savings deposits (including certificates of deposit) at U.S. financial institutions slowed slightly in 1980. The average annual increase of only 7.3 percent, compared with 8.3 percent in 1979, was due mainly to the slower growth in personal income, the continued large flow of funds to money-market funds, and renewed interest in other investment vehicles. (See Table 33.)

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*These data reflect effective rates at which the 21 largest savings and loans in Michigan were offering to make commitments during the first five working days of each month for 25-year conventional, single-family, new home mortgages with a 75 percent loan-to-price ratio.

Regular savings deposits, which declined sharply in 1979, continued to contract in the early months of 1980, falling at an annual rate of more than 25 percent in the first five months before turning up in June. Savings deposits increased at an annual rate of 24 percent from May to October as the decline in market interest rates and the public's desire to acquire highly liquid assets in view of economic uncertainty produced a progressive strengthening of inflows to savings accounts. The sharp increase in interest rates in the last few months of 1980 stemmed the growth in savings deposits in the last quarter of 1980.

Certificates of deposit (large denomination time deposits) continued to grow in the first half of 1980, although at a slower rate than in

TABLE 33
U.S. Financial Deposits, 1979 and 1980
(Annual Percentage Rates of Change)[1]

	Savings Deposits	Small Denomination Time Deposits[2]	Large Denomination Time Deposits	Money-Market Mutual Fund Shares
1979				
I	-16.0	23.8	10.9	252.4
II	-5.9	18.7	9.2	185.7
III	-4.4	15.0	24.6	148.0
IV	-24.8	25.8	22.6	117.5
Average	-12.5	23.0	12.7	323.3
1980				
I	-24.0	18.9	20.6	158.7
II	-10.8	18.6	0.0	87.3
III	27.6	0.7	-3.0	21.6
IV	-13.8	23.2	33.0	-12.3
Average	-5.4	16.2	13.0	73.9

[1]Percentage changes calculated between last month of quarter.

[2]Deposits issued in amounts of less than $100,000.

Source: *Economic Indicators*, Council of Economic Advisors, 1980, selected issues.

1979. However, CDs declined at an annual rate of 3 percent in the third quarter, before recovering sharply in the final quarter.

The growth in total savings inflows at thrift institutions slowed to 5.8 percent in 1980, with almost all of the growth occurring in the second half of the year.

Some of the funds that would have normally been invested in time or savings deposits were siphoned off to money-market funds. As recently as December, 1977, deposits in these funds were only $3.8 billion, but by December, 1979 deposits were $43.6 billion. These funds remained popular in 1980 as deposits soared to about $76 billion by year end, although growth slowed to almost a standstill in the last few months of the year.

Savings deposits at Michigan's institutions also slowed due largely to the sharp decline in real Michigan personal income. Time and savings deposits increased 10.3 percent above the 1979 level at savings and loan institutions, 8.5 percent at credit unions, and 6.5 percent at commercial banks. (See Table 34.)

TABLE 34
Michigan Institutional Savings Market, 1974-1980
(Billions)

	1974	1975	1976	1977	1978	1979	1980
Commercial Banks[1]	$18.7	$20.0	$21.9	$24.1	$26.6	$29.1	$31.0
Savings and Loan Associations	7.3	8.6	10.2	11.8	13.2	14.4	15.9
Credit Unions	2.1	2.3	2.4	2.8	3.2	3.5	3.8
TOTAL	$28.1	$30.9	$34.5	$38.7	$43.0	$47.0	$50.7

[1]Figures are for individual, partnership, and corporate deposits at Federal Reserve Member Banks.

Source: Michigan Credit Union League; Research Department, Federal Reserve Bank of Chicago; Federal Home Loan Bank of Indianapolis.

Effective January 1, 1980, commercial banks and thrift institutions were authorized to offer time deposits of any size having a maximum maturity of 2 1/2 years and a maximum yield tied to that on Treasury securities. Due to the sharp run-up in interest rates in February a temporary cap of 11.75 percent for banks and 12 percent for thrift institutions was placed on new certificates sold after March 1, 1980.

1981 Outlook

The Federal Reserve Board can be expected to keep a tight rein on monetary growth in 1981. Chairman Volcker made this very clear in remarks before the Tax Foundation in December:

> In these circumstances, an intellectual consensus rightly remains that the growth of money and credit must continue to be curbed in the interests of encouraging price stability.

However, it is likely that there will be some easing of monetary policy in the first half of 1981 due to an appreciable weakening in the economy which will lower the demand for money and credit and temper the inflationary expectations of financial market participants. The latest public pronouncements from the Fed indicate that the money growth targets for 1981 will be lowered one-half of a percentage point below the 1980 targets. This will place the growth target for M1-B at 3.5 to 5.5 percent. These targets will likely be achieved in the first half of the year but as the economy improves in the last two quarters and the demand for credit increases, the growth in money is likely to exceed the targets. It is expected that the money stock (M1-B) will grow between 6 and 7 percent in 1981. The approval of nationwide use of NOW (negotiable order of withdrawal) accounts, as of January 1, 1981, could distort money growth data. If individuals shift from regular checking accounts to NOW accounts, M1-B would be unaffected as the shift would be from one category of M1-B to another. If, however, individuals are induced to shift money out of regular savings into NOW accounts, M1-B could grow at significantly higher rates than present targets.

Interest rates most probably peaked in December and are expected to decline moderately in the first half of 1981. However, most interest rates may begin to rise in the second half of the year, as the economic recovery accelerates money growth. This growth may threaten to exceed the Fed's targets and will likely bring forth a new round of monetary restraint. The increases in the second half of 1981 will be modest and will not approach the 1980 peaks due to a reduction in inflationary expectations which may be helped by the new administration's commitment to an anti-inflationary fiscal and regulatory policy.

The discount rate is expected to drop to 11 percent by year end and three-month Treasury bill rates should fall to 10 to 11 percent by mid-year and then rise to 12 to 13 percent by year end.

The prime rate is forecast to decline to 14 to 15 percent in the second quarter and then rise about one percentage point in the last six months of 1981.

The declines in most long-term rates will be more moderate, as these rates are currently at about the right level given the underlying rate of inflation. Triple-A corporate bond rates will decline about 1 to

1.5 percentage points by the third quarter and then rise one-quarter to one-half of a percentage point in the last quarter, ending the year at 12 to 12.5 percent. Conventional 30-year mortgage rates will continue to rise in the early months of 1981, then drop slightly in the second quarter to about 13.5 to 14 percent and remain near that level for the rest of the year.

These forecasts are, of course, dependent on the inflation and economic growth forecasts discussed in detail elsewhere in this report. If, for example, more progress is made against inflation than anticipated, the declines in interest rates could be much sharper.

The growth rate in U.S. and Michigan time and savings deposits in 1981 is expected to exceed the 1980 growth rate due to improved personal income flows, a modest increase in the saving rate and lower market interest rates which help financial institutions retain some funds that might otherwise be invested in money market funds and money market certificates.

U.S. time and savings deposits are expected to increase 8 to 9 percent in 1981, compared with a 7.3 percent increase in 1980, while Michigan deposits will increase at about the same rate or slightly faster, as personal income flows strengthen in the last half of the year.

CONSTRUCTION

1980 Developments

The construction industry remained depressed in 1980 as a result of the nationwide recession and soaring interest rates that throttled housing construction. Although the current-dollar volume of expenditures for total new construction remained virtually unchanged from 1979 at $228.3 billion, the physical volume of construction declined about 10 percent. (See Table 35.) Private construction expenditures bore the full brunt of the downturn, declining about 5 percent in current dollars, while public construction increased a healthy 15.7 percent.

TABLE 35
U.S. New Construction Expenditures, 1978-80
(Billions)

Type of Construction	1978	1979	1980[1]	Percent Change 1979-80
Total New Construction	$205.5	$229.0	$228.3	-0.3
Private Construction	159.6	179.9	171.6	-4.6
Residential Building	93.4	99.0	84.0	-15.2
Nonresidential Building	36.3	47.3	53.1	12.3
Public Construction	45.9	49.0	56.7	15.7

[1]Estimate.

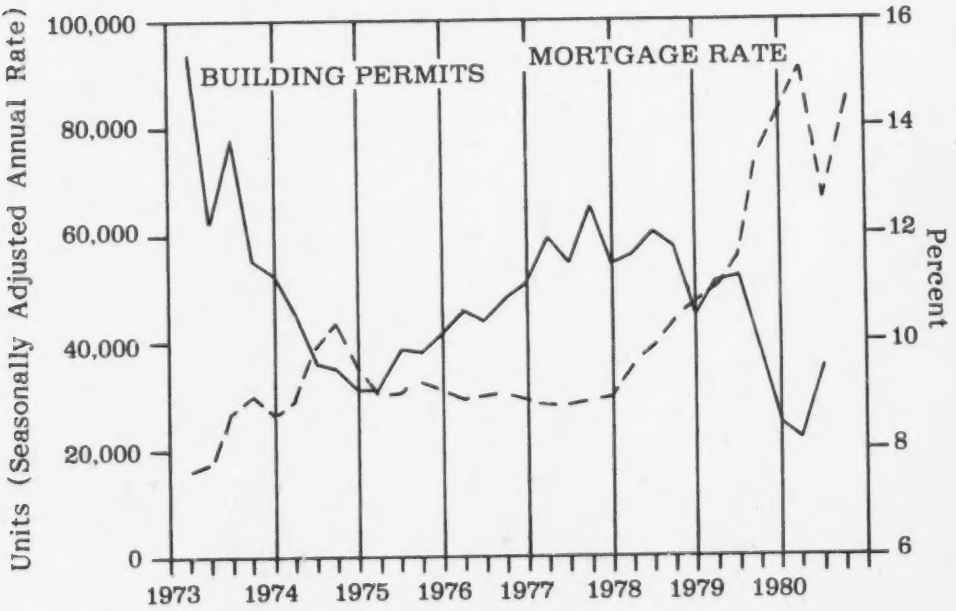
Source: *Construction Review*, U.S. Department of Commerce, Industry and Trade Administration, November, 1980.

The decline in private construction expenditures stemmed solely from the faltering residential construction market, down 15.2 percent. Housing starts began the year at a seasonally adjusted annual rate (SAAR) of 1.4 million units, sank to 906,000 units in June, and slowly recovered to end the year at the depressed level of 1.29 million units. A spectacular increase in mortgage interest rates, which began in November, 1979, was the key factor in the decline during the first half of the year, and a decline in rates in the summer led to the second-half

recovery. The drop in the traditional fixed mortgage interest rates from over 16 percent to around 12 percent in June, and the introduction of innovative forms of floating rate mortgages in the first half of 1980 were instrumental in turning the housing market around. In the last three months of the year, starts held steady at the 1.55 to 1.56 million unit range (SAAR), resulting in the year end total of 1.29 million units. Housing starts, thus, declined 26 percent from 1979's level of 1.75 million units, dropped 36 percent from 1978's level of 2.02 million units, and were only 11.3 percent greater than 1975, which was the lowest year since 1946.

Nonresidential private construction expenditures increased 12.3 percent in 1980. Four sectors outpaced all others, with growth rates of 30 to 40 percent, including: nonhousekeeping residential, such as hotel, motels, and dormitories; office buildings; privately-owned educational buildings; and miscellaneous nonresidential, such as theaters, recreation centers, bus and airline terminals, and radio and t.v. stations. Shopping centers and public utilities, closely tied to residential construction, lagged in 1980, and industrial construction declined.

CHART 5
Michigan Residential Building Permits and Mortgage Rates, 1973-1980



Source: U.S. Department of Commerce, Bureau of the Census, and Federal Home Loan Bank of Indianapolis.

Public construction was strong in 1980, rising to a record $57 billion. Despite deteriorating finances, state and local governments were able to finance new construction by utilizing the municipal bond markets. All sectors, including buildings, highways and streets, military facilities, and water-supply facilities recorded increases.

Michigan's construction industry also suffered in 1980. As can be seen in Chart 5, as average effective mortgage rates climbed, Michigan residential building permits plummeted. Total private building permits in 1980 decreased a staggering 42 percent to 28,576 units, and fell 53.2 percent from 1978's high of 61,074 units. (See Table 36.) Imposition of federal credit controls in March caused Michigan average mortgage rates to soar to 17 percent in April and permits dropped to 21,500 on a seasonally adjusted annual rate basis in the second quarter. Mortgage rates followed the national pattern, and dropped to 12.3 percent in July. As a result, permits increased to 34,821 units (SAAR), in the third quarter. The high price of new homes, an average of $73,000 in the North Central region, also contributed to the decline. Thus, high mortgage interest rates and home prices brought the Michigan housing industry to its knees in 1980.

The value of construction awards in Michigan in 1980 totaled $ 4.1 billion, 21.3 percent below 1979 awards. (See Table 37.) Residential awards declined 35.4 percent; nonresidential awards fell 2.1 percent; and public works and utilities awards dropped 25.8 percent.

TABLE 36
Michigan Residential Building Permits, 1973-1980

Year	Single Family Units[1]	Multi-Family Units[1]	Total	Percent Change
1973	35,784	35,474	71,258	-7.0
1974	26,481	17,810	44,291	-37.8
1975	26,653	10,237	36,890	-16.7
1976	32,331	13,564	45,895	24.4
1977	41,314	17,370	58,684	27.9
1978	43,387	17,687	61,074	4.1
1979	33,959	15,346	49,305	-19.3
1980[2]	18,072	10,504	28,576	-42.0

[1] A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone.

[2] Preliminary.

Source: *Construction Review*, U.S. Department of Commerce, Industry and Trade Administration, November, 1980.

TABLE 37
Annual Construction Contract Awards in Michigan, 1961-1980
(Thousands)

Year	Non-residential	Residential	Total Building	Public Works and Utilities	Total Construction
1961	$ 476,406	$ 499,822	$ 976,228	$ 325,264	$1,301,492
1962	465,567	541,802	1,007,369	346,143	1,353,512
1963	558,207	658,930	1,217,137	267,038	1,484,175
1964	788,533	741,977	1,530,510	317,401	1,848,411
1965	766,258	1,038,356	1,814,614	465,073	2,279,686
1966	930,000	835,030	1,765,100	333,200	2,098,330
1967	946,513	1,020,000	1,966,513	357,000	2,323,513
1968	912,849	1,029,581	1,942,430	407,537	2,349,967
1969	962,697	891,531	1,854,228	874,715	2,728,943
1970	955,592	942,760	1,898,352	1,052,245	2,950,597
1971	874,058	1,319,978	2,194,036	840,719	3,034,755
1972	1,010,891	1,596,633	2,607,524	842,780	3,450,304
1973	1,206,481	1,856,354	3,062,835	1,299,276	4,362,111
1974	1,355,623	1,314,147	2,669,770	791,628	3,461,398
1975	951,139	1,089,145	2,040,284	1,146,796	3,187,080
1976	1,111,835	1,481,164	2,592,999	592,738	3,185,737
1977	1,525,733	2,144,489	3,670,222	604,463	4,274,685
1978	1,752,267	2,469,130	4,221,397	1,821,304	6,042,701
1979	1,975,434	2,392,063	4,367,497	889,324	5,256,821
1980	1,933,378	1,545,615	3,478,933	660,249	4,139,242

Source: F. W. Dodge Division of McGraw-Hill Information Systems Company, special release.

As a result of the depression in the construction industry, contract construction employment declined 13 percent to 121,600 in 1980. Although nominal average weekly earnings increased from $306.62 in 1973 (the best year for construction in recent years) to $458.40 in 1980, real average weekly earnings have fallen from $227.97 in 1973 to $180.83 in 1980. Thus, construction workers' earnings have failed to keep pace with inflation in recent years.

1981 Outlook

The construction industry is expected to recover moderately in 1981 from the depressed level of 1980. The physical volume of new construction should rise about 8 percent because of a turnaround in new housing and continued growth in office building. The value of new

construction expenditures should rise 18 percent to $270 billion; however, more than half the increase will simply reflect higher input costs.

There will be a strong demand for new housing construction in 1981 created by high rates of household formation, widely held expectations of increases in house prices, large numbers of two-earner families, and favorable federal tax policies that make housing an attractive investment. Nevertheless, housing starts are not expected to exceed 1.4 million units in 1981 because of continuing high mortgage interest rates. Thus, some sales will be postponed. If mortgage interest rates dropped to 10 percent because of the policies of the new Administration to reduce inflation, there could be an unprecedented housing boom.

Both nonresidential and public construction are expected to increase in 1981, with the former recording strong performances in office buildings, hotels, and motels, and the latter recording strong performances in highways, public housing, military construction, and water-supply facilities.

The Michigan construction industry will also recover moderately in 1981. Building permits are expected to increase to 30,000 units; however, employment in the construction industry should decrease slightly to 118,700, and wage and salary payments are forecast to rise 8 percent to $2.7 billion.

AGRICULTURE

1980 Developments

Farmers' gross income in Michigan rose 10 percent over the 1979 level, as both crop and livestock receipts advanced in 1980. (See Table 38.) Crop receipts, which made up an estimated 55.2 percent of total receipts in 1980, increased by 12.8 percent. This increase was led by a rise in both prices and production for several important field crops. Prices received by Michigan farmers averaged 6.6 percent higher in 1980 than in 1979. This overall increase was due to strength in field crops and fluid milk, rather than livestock which did not fully recover from the severe price drop that occurred in late 1979 and in early 1980.

Although prices received by farmers increased, prices paid by farmers for such items as feeds, fuel, seeds, and fertilizer, also increased, climbing 11.9 percent nationally. Rising fuel and interest costs played a large part in this increase. Thus, since prices paid increased faster than prices received, farm profits were squeezed. This was partly offset, however, by increased yields. Higher costs, combined with slightly slower increases in farmland values, also likely resulted in a deterioration of farm balance sheets.

One bright spot for Michigan agriculture, though, is that it generally escaped the extreme heat and drought which damaged crops in many parts of the South and Midwest. U.S. corn production fell 16 percent, soybean production declined 20 percent, and wheat production rose only marginally; yet, Michigan field crop production continued to expand. Corn, Michigan's most important crop, set a new production record, rising 4 percent above last year's record. Soybean production increased slightly above last year's level. Dry beans and sugar beets also recorded strong increases in Michigan, rising 16 and 22 percent, respectively.

Michigan production gains were coupled with price increases in the latter part of 1980. Crop failure in the Soviet Union and Australia, increased purchases by the Peoples' Republic of China, and drought-damaged U.S. corn, wheat, and soybean crops resulted in tight world grain supplies. Supply shortages thus created higher grain and bean prices in the second half of the year. (See Table 39.)

Michigan's fruit crop production also fared well in 1980. Six of eight major fruit crops increased in production with total tonnage up 50 percent. Tart cherries, of which Michigan is the leading producer, led the increase; however, modest declines occurred in the production of plums and grapes. Despite overall production gains, the value of fruit crops fell 13 percent. The large crop of tart cherries and apples helped depress prices and other important fruit crops also experienced price declines, resulting in the lower crop values.

TABLE 38
Michigan Cash Receipts from Farm Marketing, 1979 and 1980
(Millions)

Period	Livestock and Products		Crops		Total	
	1979	1980	1979	1980	1979	1980
Jan.	$ 95.9	$ 104.2	$ 82.1	$ 98.8	$ 178.1	$ 202.9
Feb.	87.6	95.9	56.6	72.9	144.2	168.8
Mar.	98.9	100.2	84.0	99.5	182.9	199.7
April	94.2	94.6	86.4	92.4	180.6	187.0
May	98.0	98.6	69.8	90.8	167.9	189.4
June	93.2	96.7	93.1	107.4	186.3	204.1
July	94.9	104.5	114.2	137.0	209.1	241.5
Aug.	98.0	111.0	123.3	133.1	221.3	244.2
Sept.	94.6	100.6	159.0	177.0	253.6	277.6
Oct.	99.9	113.9	159.1	150.4	259.0	264.3
Nov.[1]	97.7	103.0	171.5	180.4	269.2	283.4
Dec.[1]	94.3	101.0	139.4	170.4	233.7	271.4
Total	$1,147.4	$1,224.3	$1,338.4	$1,510.2	$2,485.8	$2,734.5

[1] Estimate.

Source: U.S. Department of Agriculture and Michigan Agricultural Reporting Service.

Michigan's vegetable crop production declined 12 percent because of excess moisture during the growing season. Cabbage, lettuce, onions, carrots, cauliflower, and processed tomatoes all experienced declines. As a result, vegetable crops generally enjoyed slightly higher prices.

Livestock production was down in 1980. The number of hogs slaughtered dropped by 20 percent in Michigan during 1980, reflecting low prices at the beginning of the year and late in 1980. Nationally, hog numbers dropped by much less, only 4 percent, suggesting much less liquidation than expected. The production decline decreased the supply of hogs going to market and fostered a hog price recovery in the latter half of 1980.

Michigan red meat production also declined in the latter months of 1980. Cattle, hogs, and calves all declined below the 1979 levels. These production declines followed the national pattern, with beef, up less than 1 percent; veal, down 9 percent; and pork, up 8 percent, all as of November. Since the supply of beef remained fairly stable, beef cattle prices moved in a narrow range during the year; although, prices averaged below the previous year's level.

TABLE 39
Prices Received by Michigan Farmers, 1980

Month	Corn Per Bu.	Wheat Per Bu.	Oats Per Bu.	Dry Beans Per Cwt.	Soybeans Per Bu.	Potatoes Per Cwt.	All Hay Baled Per Ton
Jan.	$2.26	$3.92	$1.61	$18.10	$6.05	$4.65	$31.50
Feb.	2.18	3.88	1.59	19.60	6.00	4.65	39.00
Mar.	2.41	3.67	1.46	19.40	5.58	4.85	32.50
May	2.46	3.57	1.66	17.80	5.73	5.10	33.50
June	2.48	3.55	1.82	18.30	5.78	5.10	30.50
July	2.77	3.83	1.57	20.60	7.06	5.20	29.50
Aug.	2.97	3.46	1.65	23.20	7.08	5.45	29.50
Sept.	3.06	3.58	1.72	24.00	7.57	8.82	30.50
Oct.	3.00	4.16	1.88	24.80	7.75	9.44	40.50
Nov.	3.05	4.34	1.97	24.80	7.95	10.70	52.00
Dec.[1]	3.05	4.12	2.10	23.90	6.89	8.10[2]	44.00
Avg. Marketing Year	$2.66	$3.78	$1.72	$20.97	$6.58	$6.42	$36.08

Month	Hogs Per Cwt.	Beef Cattle Per Cwt.	Calves Per Cwt.	Lambs Per Cwt.	Milk Wholesale Per Cwt.	Eggs Per Doz.	Wool Per Pound	Turkeys Per Pound
Jan.	$34.40	$56.70	$83.70	$67.30	$13.00	$ .49	$ .73	$ .40
Feb.	37.00	60.10	93.70	64.70	13.00	.45	.77	.37
Mar.	33.80	56.00	89.70	64.00	13.00	.46	.79	.39
April	29.50	56.00	84.00	60.00	13.00	.42	.70	.39
May	29.80	54.30	79.90	66.20	12.90	.38	.65	.37
June	33.70	55.10	87.10	63.40	12.60	.41	.63	.32
July	42.00	55.40	89.60	65.00	12.70	.45	.67	.41
Aug.	46.50	58.20	87.60	63.10	12.90	.45	.67	.41
Sept.	47.00	55.00	81.00	65.80	13.20	.53	.69	.51
Oct.	47.80	55.70	74.00	61.80	13.60	.52	.70	.54
Nov.	46.20	53.70	65.90	57.00	14.10	.60	.70	.54
Dec.[1]	44.80	52.30[3]	69.00	53.20	14.00[2]	.63	.70	.50
Avg. Calendar Year	$39.38	$55.68	$82.10	$62.62	$13.17	$ .48	$ .70	$ .43

[1] December 15th price.

[2] Data for whole month.

[3] Preliminary.

Source: *Agriculture Across Michigan*, U.S. Department of Agriculture and Michigan Department of Agriculture, Michigan Agricultural Reporting Service, selected issues, and special release 1980.

During 1980, the state's farmland acreage held steady, as during the previous four years, but farm size is estimated to have increased. Therefore, the number of farms declined by 1,000 to 65,000, at the beginning of 1981.

1981 Outlook

The outlook for crops during 1981 is for considerable volatility in prices. Lower world grain reserves will exert an upward pressure on prices, as well as contributing to price instability. Corn prices may be restrained for a few months by the call on corn reserves. Grain and soybean prices should increase moderately, but a third bad crop year worldwide could yield sharp price increases.

Higher feed grain prices will cause increased caution among cattle feeders, hog producers, and poultry producers. Many animal raisers lost money late in 1979 and early in 1980. Just as prices recovered, grain prices began to rise. Although animal raisers have not cut back very sharply in early 1981, any increase in grain prices will cause further retrenchment, and raise meat prices, since flocks and herds are already somewhat reduced. Pork production is likely to actually decline, while beef production should stay about the same. Overall, meat production could decline slightly. With some recovery in economic activity, meat prices could rise sharply, perhaps by 16 percent.

Retail food prices will rise between 11 and 13 percent in 1981. Meat prices will be a factor in this move as will egg prices. Equally important will be the rise in sugar prices which will also affect cereals and beverages. Sugar prices doubled during 1980 and the supply shortage will carry over into 1981. Grain price increases will result in moderately higher prices for cereals, bakery products, and flour. Marketing costs for food are expected to rise at about 9 percent reflecting cost increases in the distribution channel.

Farm income should improve in 1981. While cost pressures will continue at an estimated 11 percent, prices for farm products should rise even faster, so that farm income will increase an estimated 20 percent in 1981, after a poor year in 1980. The outlook for Michigan is tempered somewhat by the risk of weather problems for fruit and vegetable farmers and possible production cost pressure on milk producers. Overall, Michigan farmers may not achieve quite as large a percentage increase in farm income as nationally but should do reasonably well in 1981.

MINERAL SUPPLIES AND MINING

1980 Developments

Overall mineral availability was characterized by constant or increasing supplies in the face of declining demand, resulting in lower prices for metallic and nonmetallic minerals in 1980. However, tight mineral fuel supplies and oil-price decontrol produced price increases for petroleum products. This divergent behavior reflects government policies both in the U.S. and abroad and the effects of the weak economy in 1980. Overall value of Michigan estimated mineral production rose by 9.7 percent to $2.5 billion in 1980. (See Table 40.)

Iron ore lost its position as the most valuable mineral product produced in Michigan to petroleum. This occurred because auto-related steel suppliers in the lower Great Lakes area demanded less iron ore. As a result, the Empire and Republic iron mines were closed for part of the year, although they have since re-opened, and the Groveland Mine closed in early 1981.

The rise in the value of oil during 1980 came entirely from higher prices rather than increased production since oil production actually declined slightly. Decontrolled oil prices averaged 30.3 percent higher than in 1979, with increases occurring steadily throughout the year.

Natural gas prices rose more slowly under partial federal price decontrol and these rising prices spurred increased exploration activity. Thus, natural gas production increased an estimated 5.5 percent.

Copper production fell because of a strike and technical problems but Michigan's only operating copper mine, White Pine, plans to open a major new copper refinery in 1981.

The depressed state of the construction industry combined with the closing of a major salt and brine producer reduced production of nonmetallic minerals moderately. While most price increases lagged the overall inflation rate, cost pressures still raised prices.

During 1980, speculative pressures in metal markets eased and the weak economy led to reduced demand for several commodities important to Michigan industry. These factors actually brought spot market prices for copper, aluminum, and lead below the average price of 1979 by December. Moderate demand for steel and cost-push factors resulted in increased steel price increases. Worldwide zinc supplies remained limited and prices for zinc and nickel rose moderately.

1981 Outlook

Prices for Michigan oil will continue to rise in 1981. As of late January, 1981, the Reagan administration decided to accelerate the removal of oil-price controls, previously scheduled for phase-out by

October 1, 1981. This action suggests that all Michigan oil could be selling at close to world prices of about $35 a barrel as early as February, 1981. Because of declining petroleum use and slow economic growth, price increases in 1981 are expected to be moderate; however, uncertainty about world supplies, now more than adequate, could change this forecast. For example, a spread of the Iran-Iraq war would sharply increase prices.

In 1981, oil and gas production in Michigan will begin to be augmented by production from the Pigeon River Country State Forest. While production is unlikely to be at much more than one-third of capacity by year end, this increase will help offset declining oil production in the older Niagran reef fields. The higher gas and oil prices have also brought about deeper drilling in central Michigan and some of the older oil fields. While speculative, this activity could yield some new production by year end.

The partial recovery of the automobile and construction industries should help the steel industry and enable iron-ore producers to maintain production at 1980 levels, despite moderately heavy inventories going into the year. Prices for iron-ore pellets in 1981 will average at least 9 percent higher than last year.

The recovery of the construction industry should also assist producers of nonmetallic minerals. During 1981, it is estimated that nonmetallic mineral production will rise by a small amount.

The effort to reduce the weight of American automobiles is shifting the mineral supplies needed by this important industry and reducing overall use. The use of plastics, made from oil or natural gas-based chemicals, aluminum, and zinc, are increasing while cast-iron and steel decrease in use. This shift could amount to several hundred pounds per automobile over the next few years. The health of the iron-ore industry will therefore depend, in part, on the ability of the steel industry to develop lighter products and new markets.

As 1981 begins, Europe and Japan show signs of sliding into a recession, high U.S. interest rates make heavy inventories costly, and the automobile and housing industries face slow recovery. Thus, possible excess production of aluminum, copper, and lead will result in continued price declines; although, prices for these metals should stabilize with economic recovery in the second half of the year. Zinc prices will likely be higher because of a tighter supply situation, resulting from the absence of worldwide inventories.

In summary, mineral supplies for Michigan industry seem adequate for 1981; although, there is a limited possibility that petroleum supply problems could develop. The value of Michigan's own mineral production is estimated to rise 10 percent in 1981. This would consist of a 2 percent rise in volume of production and an 8 percent price increase.

TABLE 40
Mineral Production in Michigan, 1979 and 1980[1]

Mineral	1979 Quantity	1979 Value (millions)	1979 Percent of Total Value	1980[2] Quantity	1980[2] Value (millions)	1980[2] Percent of Total Value
Metallic						
Copper: recoverable content of ores, etc. (short tons)	44	$ 81.6	3.5		$ 71.8	2.8
Iron Ore: useable, gross weight (thousand long tons)[3]	17,196	596.5	25.8	16,184	655.4	25.9
Silver: recoverable content of ores, etc. (thousand troy ounces)	475	5.3	0.2	317	6.8	0.3
Value Metallics		$ 683.3	29.6		$ 734.0	29.0
Fuels[3]						
Petroleum (thousand 42-gallon barrels)	34,862	$ 524.3	22.7	33,900	$ 664.0	26.2
Natural Gas (million cubic feet)	150,731	279.1	12.1	159,000	386.0	15.2
Value Fuels		$ 803.4	34.8		$1,050.0	41.4
Nonmetallics Other Than Fuels						
Cement						
Masonry (thousand short tons)	262	$ 16.5	0.7	207	$ 14.4	0.6
Portland (thousand short tons)	5,682	252.1	10.9	4,671	228.5	9.0
Clay (thousand short tons)	2,072	7.4	0.3	1,968	6.5	0.3
Gypsum (thousand short tons)	2,562	14.6	0.6	2,089	13.6	0.5
Lime (thousand short tons)	1,057	43.4	1.9	807	37.6	1.5
Peat (thousand short tons)	258	4.8	0.2	244	5.5	0.2
Natural Brines (Bromine, Calcium Chloride, Iodine, and Magnesium)	NA	185.2	8.0	NA	182.3	7.2
Salt (thousand short tons)	3,080	82.5	3.6	2,752	76.9	3.0
Sand and Gravel (thousand short tons)	50,169	116.6	5.0	40,300	98.7	3.9
Stone						
Dimension (thousand short tons)	9	0.2	0.0	9	0.2	0.0
Crushed (thousand short tons)	39,809	99.8	4.3	30,500	85.4	3.4
Value Nonmetallics		$ 823.1	35.6		$ 749.6	29.6
TOTAL		$2,309.9	100.0		$2,533.6	100.0

[1]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

[2]Estimates.

[3]Data provided by Michigan Department of Natural Resources.

Source: U.S. Department of Interior, U.S. Bureau of Mines, except mineral fuels as noted; 1980 estimates from Michigan Department of Natural Resources assisted by the U.S. Bureau of Mines.

TRANSPORTATION

1980 Developments

In 1980, Michigan's transportation systems were affected by the continuing decline in revenues. Total income of $738.5 million fell $77.7 million short of the original projection. Factors contributing to this decline include: a) less travel by motorists and the trucking industry--miles driven on Michigan's highways, roads and streets declined 5.2 percent from 64.9 to 61.5 billion; and b) a drop in gasoline consumption from 4,438 to 4,006 million gallons or 11.2 percent and in diesel fuel consumption from 361 to 307 million gallons or 6.9 percent.

Highways

The state's freeway system grew to 1,723 miles in 1980 with the completion of new segments of US-31 and US-131 in western Michigan. A 4.4-mile section of US-31 extended the freeway north to the Oceana-Mason county line east of Pentwater. A 12.6-mile stretch of US-131 opened late in the year took the freeway north from M-46 at Howard City to the Morley-Stanwood area in Mecosta County, leaving only 29 miles to go to complete the link-up with the existing freeway south of Cadillac. In other areas of the state, work continued on the 40-mile final section of M-21 between Lapeer and Port Huron and a 3.1-mile section of I-69 north of Lansing as well as a 3.6-mile stretch of US-31 extending north from US-12 near Niles and the final link of I-475 through Flint. Good progress was made on the $77 million high-level bridge to replace the existing drawbridge carrying I-75 over the Saginaw River north of Saginaw.

Rail Freight

State and federal funding continues to maintain railroad freight service on 841 miles of track in Michigan. Plans are underway to take 105 of these miles (from Linwood to Sallings) off state subsidy in 1981, resulting in a long-term solution to a rail-abandonment problem. The state also has been assisting the Escanaba and Lake Superior Railroad in rehabilitating almost 100 miles of rail track in the Upper Peninsula. A purchase lease-back program for new rail facilities to encourage economic development is being prepared for 1981. Grants for rail facilities to serve industrial sites in Sterling Heights, Lake Orion, and Cascade Township are being processed. Because many Michigan companies depend on rail freight services, this entire subsidy program provides important assistance to Michigan's economy.

Intercity Passenger Programs

State supported intercity passenger travel includes railroad and bus programs. These operations continued to expand in 1980. The state-supported Amtrak train between Detroit, Dearborn, and Jackson, carried almost 90,000 passengers in 1980. The Amtrak train between Port Huron and Chicago carried about 107,000 passengers. Improvements to track and signals have reduced the travel time on these routes and new equipment was introduced.

Aviation

Aviation activity declined in Michigan during 1980. Aviation activity has been affected by deregulation, fuel prices and availability, and the state of the economy. An analysis of the four measures of aviation reveals that the number of airline passengers, airline cargo, and control tower operations fell slightly while the number of registered aircraft experienced a small increase.

Passengers at Michigan's 21 air carrier airports decreased from 13,642,100 in FY79 to 13,446,600 in FY80, a decrease of 1.4 percent. This is a minor reduction in view of the 5 percent decrease in the national trend. Exceptions to this overall decrease were Escanaba, Grand Rapids, Ironwood, Saginaw, and Traverse City. All recorded an increased number of passengers. Detroit Metropolitan continues to be the busiest Michigan airport, accounting for almost 76 percent of the state's airline passengers. Kent County International Airport (Grand Rapids) continued to increase its share of Michigan airline passengers and served 7 percent of Michigan's air travelers.

In addition to the decline in the overall number of passengers, the number of control tower operations decreased 5.7 percent. Airline cargo, highly dependent on the auto industry, also declined, by almost 36 percent. Despite these falloffs, aircraft sales continued brisk and the number of registered general aviation aircraft in the state increased almost 3 percent to a record 6,792.

Ridesharing

The state ridesharing program continued to expand in 1980. Major emphasis was placed upon the establishment of twenty local ride-sharing offices that service almost all Michigan residents. These offices are located in local planning and transit agencies and provide assistance to employers and individuals in developing carpools and vanpools in coordination with public transportation services. A new vanpool concept called MichiVan also was established in 1980. This program will provide a vanpool vehicle to any group of nine or more persons anywhere in the state. The total number of vanpools in Michigan increased to more than 410, including 118 vans in the state

employee program. The state-employee program received a special presidential award for energy conservation. Its 1,300 participants saved almost one million gallons of gasoline annually.

1981 Outlook

In 1981, fuel consumption will continue to decline as the fleet of automobiles becomes lighter and more fuel efficient, and as ride-sharing and public transportation programs expand. The result will be reduced revenues for transportation combined with higher costs induced by inflation. A total $187 million shortfall in revenues anticipated from the 1978 transportation tax package through 1981 is forcing the curtailment of many transportation programs. Revision of the structure that finances transportation is needed to correct this situation.

The Michigan Department of Transportation expects to award construction contracts totaling approximately $200 million, including those for county road and municipal street projects eligible for federal aid. The total will be about the same as in 1980. A greater proportion of revenues for highway, road and street work will go for maintenance and less for construction. Similarly, most state and federal revenues for public transportation and railroads will be spent for maintenance of existing services, leaving less for expansion and for capital projects.

Work will be completed or begun on a number of major state highway projects. The final 6.2-mile section of I-475, serving Flint from I-75, will be opened in the summer. Work will start on the next section of US-31 to carry the freeway north to US-10 at Ludington and on the next segment of US-131 to push the freeway north to the Big Rapids area. More work is scheduled to start on I-69 north of Lansing, on M-21 in Lapeer and St. Clair Counties and on M-53 in Macomb County.

In 1981, the state will open intermodal transportation centers in Houghton, Alma and Marquette, and will begin construction on major centers in Pontiac and Battle Creek. It is anticipated that in 1981 the intercity bus industry will be deregulated nationally. In that event, Michigan will face elimination of vital intercity bus services in some rural areas. The state will continue to work closely with local communities and the federal government to develop responsive alternatives and assistance to this industry to avoid isolation of our communities.

TOURISM

1980 Developments

Tourism declined slightly from 1979 to 1980 due to the recession. As the economy slows down consumers and businesses tend to travel less and spend less on discretionary items. In 1980, the number of miles driven on Michigan highways continued to decline from 64.9 to 61.5 billion miles.

Despite this temporary decline, tourism has become a major growth factor for Michigan's economy in recent years. The tourist business is of particular importance to the northern Michigan economy because very little heavy industry is located there. Also, tourism benefits the southern Michigan city dwellers.

TABLE 41
Michigan Tourism Indicators, 1978-80

	1978	1979	1980	Percent Change 78-79	Percent Change 79-80
Mackinac Bridge Crossings	2,539,600	2,293,400	2,300,200	-9.7	+0.3
State Park Camping Attendance					
Region I (U.P.)	1,192,100	954,600	932,500	-19.9	-2.3
Region II (Northern L.P.)	2,686,500	2,496,800	2,396,500	-7.1	-4.0
Region III (Southern L.P.)	2,015,300	1,946,600	1,853,000	-3.4	-4.8
STATE TOTAL	5,893,900	5,398,000	5,182,000	-8.4	-4.0
Number of Delegates at Major Convention Facilities	1,075,100	1,143,400	1,109,500	-6.3	-3.0

Source: Michigan Department of Commerce, Travel Bureau.

As shown in Table 41, overall state park camping attendance declined by 4 percent. However, this decline is less dramatic than the 8.4 percent drop in attendance from 1978 to 1979. Since Michigan's travel is more likely to be by car than plane, the rise in gasoline prices contributed significantly to the 1978-79 decline.

The drop in state park attendance from 1979 to 1980 was not uniform throughout the state. The upper peninsula fared better than the upper northern and southern areas of the lower peninsula with a reduction of 2.3 percent, as compared with declines of 4 and 4.8 percent, respectively.

As business attempts to reduce travel expenses, the number of delegates to conventions has dropped off slightly by 3 percent. This is less of a decline than the 6 percent reduction from 1978 to 1979. The convention business should be stabilized by the good impression created by the success of the 1980 Republican National Convention in Detroit.

On the bright side, the number of Mackinac Bridge crossings increased 0.3 percent in 1980. Similarly, the lodging industry performed well with a 7.5 percent increase in room sales in the first quarter of 1980 compared with the year-ago quarter. This sales increase can be mainly attributed to rising room rates. Rate increases partially explain the 7.3 percent decline in overall occupancy; even larger declines occurred in the central cities.

1981 Outlook

Tourism and conventions are projected to be a major stimulus to the Michigan economy in 1981 and future years. The success of the 1980 Republican National Convention and the upcoming superbowl are expected to attract convention business to Detroit and other medium-sized urban areas with expanding facilities. Other Michigan cities gaining reputations for their convention business are Grand Rapids, Traverse City, Kalamazoo and Battle Creek.

As the economy recovers, travelers are expected to take trips deferred in 1979 and 1980. The number of tourists in northern Michigan will probably reach higher levels as air travel rates increase, and air service to middle-sized cities is curtailed.

INTERNATIONAL TRADE

1980 Developments

International trade improved in 1980. As shown in Table 42, the U.S. current account balance, the broadest measure of U.S. international trade and financial transactions, improved from a minus $2.4 billion in the second quarter to $4.9 billion in the third quarter of 1980. This positive trend is expected to surpass the 1976 record by reaching a surplus of $5 billion at year end.

TABLE 42
U.S. International Trade Balance, 1979 and 1980
(Billions)

	Merchandise Balance			
	Exports	Imports	Net Balance	Balance on Current Account
1979				
I	$ 41.8	$ 46.9	$ -5.1	$ 1.4
II	42.8	50.9	-8.1	-1.5
III	47.2	54.3	-7.1	1.1
IV	50.2	59.5	-9.3	-1.8
1980				
I	54.7	65.6	-10.9	-2.6
II	54.7	62.2	-7.5	-2.4
III	56.3	59.1	-2.8	4.9

Source: *Economic Indicators*, Council of Economic Advisors, December, 1980.

A second indicator of international activity, the U.S. merchandise balance (i.e. exports minus imports), has been running a deficit. However, a review of the first three quarters of 1980 indicates a steady improvement from a minus $10.9 billion in the first quarter to a minus $2.8 billion in the third quarter.

Exports increased from $54.7 to $56.3 billion from the first to third quarter of 1980. Exports are an increasing part of the U.S. economy, growing from 6 to 12 percent of the Gross National Product during the last decade. The increase in exports can be accounted for by the depreciation of the dollar, accelerated economic growth of major countries compared with the U.S., and the tightness of foreign monetary conditions.

Imports declined from $65.6 to $59.1 billion from the first to third quarter of 1980. A large percentage of the decline can be attributed to a sharp decrease in U.S. oil import demand from $20.5 to $17 billion ($82 to $68 billion at an annual rate) over the same period. The decline in U.S. oil import demand can be explained by a combination of factors including a mild winter, increased oil prices, and the downward trend in the economy. The mild winter left inventories at higher than normal levels. Oil consumption declined during the recession, in part, because less goods were shipped and a smaller number of employees drove to work.

The upward trend in U.S. exports carried over to Michigan. Michigan's agricultural exports set a new record in 1980 with the value totaling over one-half billion dollars. Increased foreign demand for corn, soybeans, dry beans and a wide variety of other commodities contributed to the strong export performance.

TABLE 43
Trade Under the U.S. Automotive Agreement With Canada, 1979 and 1980
(Millions)

	1979			1980[1]		
	U.S. Exports	U.S. Imports	Balance	U.S. Exports	U.S. Imports	Balance
Cars	$ 3,147	$ 3,707	$ -560	$ 3,065	$ 3,545	$ -480
Trucks	1,654	1,978	-324	1,113	1,539	-426
Parts	7,344	3,831	3,513	6,334	2,793	3,541
Tires & Tubes	128	199	-71	135	153	-18
TOTAL	$12,273	$ 9,715	$ 2,558	$10,647	$ 8,030	$ 2,617

[1]Estimates.

Source: U.S. Department of Commerce.

Feed grains, soybeans and vegetables including dry beans were the state's leading export commodities. Japan was by far the largest single market for Michigan agricultural products, accounting for nearly

20 percent of the state's total farm exports. Canada was the second largest market, accounting for about 10 percent. The Netherlands, West Germany, United Kingdom, Korea, Mexico, Taiwan, and Italy were also important trading partners.

One of Michigan's largest export sectors is the auto industry. Michigan's autos are traded primarily with Canada under the U.S. Automotive Agreement which allows cars, trucks, parts, tires, and tubes to flow over the border, duty free.

In 1980, Michigan's auto balance of trade improved by 2 percent from $2.5 to $2.6 billion. This favorable balance of trade stemmed from the export of parts to Canada, as Canadians exported a greater number of Michigan's cars, trucks, and tires. However, total trade declined from $22 to $18.7 billion. Michigan's imports declined from $9.7 to $8 billion, or by 17 percent, compared with a drop from $12.3 to $10.6 billion, or 13 percent, for exports. (See Table 43.)

In 1980, Michigan attracted an estimated 21 new foreign firms bringing the total number in Michigan to 120. Most of these new firms operated in industries such as automotive, machinery, and fabricated metals. Due to the new Volkswagen plant located in Sterling Heights, the number of employees working in foreign firms will increase substantially from 765 to 4,400 when the plant becomes fully operational.

1981 Outlook

Although the current account balance is projected to record a surplus of $10 billion in 1981, this favorable balance may be temporary. Once the economy recovers, the demand for imports will not continue to decline and is likely to stabilize at the present level. Import volumes are not expected to reach the pre-recession level until the second quarter of 1982. Late in 1982, oil imports are projected to begin an upward trend as the dollar weakens in response to lower interest rates. In addition, oil prices are also expected to increase about 15 to 20 percent in 1981 as supplies are used up. Despite the 6 percent drop in oil consumption by the industrialized world in 1980, oil inventories continue to decline due to the usual seasonal drawdown of stocks and the falloff in production resulting from the Iraq-Iran War. When these supplies are used up, OPEC is expected to raise prices to between $40 to $50 a barrel.

Exports are expected to decline due to the weakening economies of Europe and Japan during the first three quarters of 1981. As imports stabilize or increase, and exports decrease, the merchandise trade balance is expected to resume its downward trend.

In 1981, Michigan expects to attract 25 new foreign firms with 1,200 jobs. In addition, exports of agricultural products are projected to grow while auto parts exports are expected to decline. The auto pact with Canada may become a disadvantage as Michigan loses the edge on exports of parts to Canada. However, the U.S. probably will maintain

its share of the large Canadian passenger car market. Exports of Michigan agricultural products are expected to increase steadily to developed countries but more rapidly to developing countries as the continued moderate economic growth in these countries will generate a higher demand for our products. The stronger agricultural export programs at both the federal and state levels will also help to stimulate more sales of our products overseas. A Governor's conference on agriculture is scheduled this year to accelerate the effort to expand overseas sales of Michigan agricultural products. In addition, Michigan will sponsor a trade mission to South America, and participate in trade shows hosted by Canada, Australia, and Latin America.

APPENDIX A
INTERGOVERNMENTAL ISSUES

INTERGOVERNMENTAL ISSUES

State Financial Assistance to Local Units

In 1980, the depressed economy caused a reduction in total state revenues and this resulted in a reduction of state financial assistance to local units of government in FY80. Because of severe revenue shortfalls in FY80, the Governor issued an Executive Order directing a reduction of state spending, including assistance to local units, of $250 million. A comparison of Item IA in Table A-1, "State Financial Assistance to Local Units of Government," with the comparable table in the 1980 *Economic Report*, shows the extent of the reductions.

The outlook for FY81 is for small growth in state assistance to local units with total State Revenue Sharing increasing to $471.1 million, or about $72 million below what was projected a year earlier. While $20 million of this difference stems from legislative action eliminating the June, 1981 intangibles tax and relative tax burden payments, and reducing income tax payments to counties by $7 million, the remaining $52 million is again the result of revenue collections falling below original projections. Thus, for both fiscal years, the constrained state budget has and will result in less state aid to local units of government than originally anticipated.

Some improvement in the economy is forecast for FY82, however, and this will result in greater assistance to local units in FY82. Table A-1 shows revenue growth of $86 million, restoration of certain cuts, and new recommendations. The growth in revenue includes the Governor's recommendation to restore funding for the intangibles tax and relative tax burden payments and to make no reduction in county payments. The Governor is also recommending initiation of a program for distressed communities. This was originally proposed in 1980, but later withdrawn when it became apparent that funding was not available.

An issue of continuing concern for local government is the failure of gas and weight taxes to keep up with road construction and maintenance needs. The trend toward lighter and more fuel-efficient cars, along with the constraint that increasing prices have on motor fuel purchases results in a projection for the Michigan Transportation Fund that is $10.7 million less in FY81 than was distributed in FY80. Revenues are anticipated to further decline by $2.7 million in FY82.

In conclusion, the table shows that despite the effects of the economy on state revenues and expenditure patterns, some growth is anticipated in aggregate state financial assistance to local governments between FY80 and FY81. It also shows that these units should experience continued growth in assistance for the 1982 fiscal year,

TABLE A-1
State Financial Assistance to Local Units of Government
(Millions)

Source of Revenue	Estimated Expenditures 1979-80				Appropriations and Estimated Distribution 1980-81				Recommendations and Estimated Distribution 1981-82			
	Cities & Villages	Town-ships	Counties	Total	Cities & Villages	Town-ships	Counties	Total	Cities & Villages	Town-ships	Counties	Total
I. Unrestricted State Shared Revenues												
A. State Revenue Sharing Act												
1. Sales Tax	$155.951	$74.077	$ --	$ 230.028	$142.840	$ 93.260	$ --	$ 236.100	$164.200	$104.900	$ --	$ 269.100
2. Income Tax	105.908	6.107	60.230	172.245	110.790	9.510	57.800	178.100	130.900	98.000	75.800	304.700
3. Intangibles Tax	--	--	--	--	--	--	--	--	5.800	3.700	--	9.500
4. Single Business Tax	57.585	3.312	--	60.897	52.382	4.494	--	56.876	54.400	4.100	--	58.500
5. General Fund	1.710	3.290	--	5.000	--	--	--	--	1.050	2.450	--	3.500
B. Distressed Communities Grant	--	--	--	--	--	--	--	--	39.743	.257	--	40.000
Total	$321.154	$86.786	$ 60.230	$ 468.170	$306.012	$107.264	$ 57.800	$ 471.076	$396.093	$213.407	$ 75.800	$ 685.300
II. Restricted State Revenues												
A. Michigan Transportation Fund	$130.906	$ --	$235.737	$ 366.643	$126.874	$ --	$229.041	$ 355.915	$125.894	$ --	$227.272	$ 353.166
B. Other	5.962	1.205	.370	7.537	6.236	1.261	.373	7.870	5.154	1.261	.373	6.788
Total	$136.868	$ 1.205	$236.107	$ 374.180	$133.110	$ 1.261	$229.414	$ 363.785	$131.048	$ 1.261	$227.645	$ 359.954
III. Programmatic Grants												
A. Mental Health	$ --	$ --	$113.112	$ 113.112	$ --	$ --	$324.475	$ 324.475	$ --	$ --	$494.396	$ 494.396
B. Public Health	8.231	--	26.164	34.395	6.844	--	22.458	29.302	8.161	--	22.065	30.226
C. Social Services	--	--	35.658	35.658	--	--	42.301	42.301	--	--	52.962	52.962
D. Other	87.410	.360	23.813	111.583	79.957	.327	20.021	100.305	86.092	.280	44.131	130.503
Total	$ 95.641	$ .360	$198.747	$ 294.748	$ 86.801	$ .327	$409.255	$ 496.383	$ 94.253	$ .280	$613.554	$ 708.087
IV. Reimbursement for Property Exempt from Taxes												
A. Single Business Tax Inventory Reimbursement	$ 62.299	$ 4.531	$ 29.854	$ 96.684	$ 69.851	$ 4.694	$ 29.979	$ 104.524	$ 69.900	$ 4.600	$ 30.000	$ 104.500
B. Other	2.545	4.011	5.661	12.217	2.803	2.808	4.477	10.088	3.000	2.931	4.745	10.676
Total	$ 64.844	$ 8.542	$ 35.515	$ 108.901	$ 72.654	$ 7.502	$ 34.456	$ 114.612	$ 72.900	$ 7.531	$ 34.745	$ 115.176
V. Other Reimbursement	$ 4.440	$ .618	$ 13.695	$ 18.753	$ .615	$ --	$ 11.727	$ 12.342	$ 3.870	$ .220	$ .050	$ 4.140
Grand Total	$622.947	$97.511	$544.294	$1,264.752	$599.192	$116.354	$742.652	$1,458.198	$698.164	$222.699	$951.794	$1,872.657

Source: Michigan Department of Management and Budget.

given the projected improvement in the economy. However, in specific areas, particularly those related to mass transit and road programs, the growing disparity between revenue resources and program needs is an issue for concern in state and local relations.

The Impact of Section 30

The tax limitation amendment of 1978, and the budget difficulties experienced in FY80 and FY81 combined to result in a change in the distribution of state and local responsibilities. Section 30 of the tax limitation amendment guaranteed that local units of government would receive a proportion of state expenditures no less than they received in FY79 — 41.6 percent of state revenues. At the beginning of FY81, however, this provision seemed to be a budgetary impossibility. Given the severity of the fiscal conditions facing the state, a full-year budget was not adopted prior to October 1, 1980, the beginning of the state fiscal year. Instead, a three-month continuation budget was enacted with action on the full-year budget delayed until December, 1980 when a more accurate estimate of anticipated revenues could be made. It became apparent that it would be very difficult to maintain state spending for local units at the constitutionally mandated proportion of 41.6 percent of total state spending in FY81. Without program reductions and shifts in responsibilities, this requirement could not be met, and the overall budget would not be in balance. While many cuts were made in state programs, reductions had to be made in state aid to local units of government as well in order to balance the state budget. This made maintaining the proportion of local spending at the required level difficult.

One method of coping with this problem was to redefine certain activities previously carried out by the state as local responsibilities. For example, this technique was employed with the care for the mentally ill. An on-going trend established by the Mental Health Code of 1974 was to shift from the state to the counties the primary responsibility for the direct delivery of mental health services. This also helped restore the balance between state and local expenditures and accelerated the Governor's policy supporting the de-institutionalization of mental health patients. The appropriation act for FY81 provided funding to community mental health boards to purchase services from state facilities and for approved community-based programs to reduce the utilization of state facility inpatient services. Of the $211.4 million increase between FY80 spending and FY81 appropriations shown in Table A-1 for mental health programs, $171.4 million was attributable to this new division of responsibilities. This division was also reflected in the Governor's recommendations for FY82, along with a continuing emphasis on the de-institutionalization of patients.

Many local units of government are faced with serious financial difficulties, to varying degrees, and state government remains com-

mitted to assist local governments to the extent possible, as indicated by the proposed distressed cities program. However, the state's ability to assist locals has been seriously reduced by the weak economy and the increasing pressures on state services such as corrections, welfare, and mental health. The challenge for upcoming years is to maintain a reasonable balance between state and local services, given the current financial problems and the reduced flexibility caused by Section 30.

APPENDIX B
SELECTED 1980 PUBLIC ACTS OF ECONOMIC SIGNIFICANCE

SELECTED PUBLIC ACTS OF 1980

Banking and Finance

Auto Loan Interest (P.A. 79-82)
Raise the interest ceiling on loans for motor vehicles to make more money available for car purchases. Expires June 19, 1981.

South African Banking Prohibition (P.A. 325)
Prohibits the state from depositing any surplus funds in state or federally chartered banks making loans to the Republic of South Africa, South African corporations, or any corporation doing business in South Africa.

Home Improvement Interest (P.A. 406)
Allows the interest rate on home improvement loans to go as high as 16.5 percent and ties the interest rate increase to the interest rate on U.S. Treasury bonds. Expires December 31, 1981.

Consumer Protection

Phone Commercials (P.A. 47)
Prohibits use of telephones to deliver unsolicited recorded commercial messages.

Tenant Evictions (P.A. 75)
Prohibits evicting tenants because of membership in tenant organizations.

Installment Sales Contract Claims (P.A. 76-78)
Permit a consumer to initiate claims against the holder of a retail, automobile, or home improvement installment sales contract.

Property Condemnation (P.A. 87)
Modernizes procedures for property condemnation, with provisions to protect the rights of property owners.

Repossession Licensing (P.A. 102)
Requires repossession agents to be licensed under the collection practices act. Requires collection agencies to give notice to a consumer of to whom a bill is owed and for how much. Prohibits misleading communication with a debtor, and forbids a collection agency from taking action against a debtor while a bill is being verified.

Home Solicitation Sales (P.A. 108)

Prohibits telephone or in-person home solicitations on Saturdays, Sundays, and business holidays.

Senior Citizen Housing (P.A. 170)

Exempts housing intended solely for use by senior citizens from law prohibiting housing discrimination because of age.

Condominium Conversion Protection (P.A. 283)

Provides for increased notice to tenants of plans to convert apartment units to condominiums and provides extended lease arrangements for certain senior citizens and handicappers residing in such units.

Blue Cross/Blue Shield Reform (P.A. 350)

Restructures Blue Cross/Blue Shield by improving public representation on its board, establishing cost containment goals, and designing a new approach to rate increases.

Wage Assignments (P.A. 392)

Provides due process to borrowers by prohibiting wage assignments by finance companies and requiring that such companies will have to rely on a statutorily regulated alternative, garnishment.

Substance Abuse Treatment Insurance (P.A. 429 and 430)

Require coverage by Blue Cross/Blue Shield and other commercial insurance companies writing health insurance to include in their coverages treatment and rehabilitation for drug and alcohol abuse.

Local Government

Wayne County Reorganization (P.A. 7)

Provides for Wayne County Board of Commissioners to place on the ballot a proposal to create a charter commission, and outlines requirements of charter proposals.

Downtown Development (P.A. 42)

Allows any municipality or township, not just Detroit, to create a downtown development district with an income tax, property tax exemptions, and a commercial housing facilities tax.

Neighborhood Assistance (P.A. 56)

Provides state rebates on part of the contributions made by businesses to neighborhood assistance projects.

Tax Anticipation Notes (P.A. 85)

Permits issuance of tax anticipation notes by local government for payment of an expense which cannot be funded because of a delay in

receipt of anticipated revenue or for payment of budgeted expenses that precede budgeted revenue. Replaces 10 percent ceiling on notes to a rate of up to 70 percent of the prime interest rate. Expires April 30, 1981.

School Aid Anticipation Notes (P.A. 88)

Raises the maximum interest rate on school aid anticipation notes from 8 to 12 percent, until April 30, 1981.

Detroit and Grand Traverse Hotel and Motel Tax (P.A. 383 and 395)

Permit Detroit and the Grand Traverse region to impose a hotel and motel room tax of 2 percent to support convention and tourist bureaus in these localities.

Revenue Sharing (P.A. 393)

Requires the state to figure local tax effort, for purposes of revenue sharing, on the basis of property taxes levied before tax rates were reduced under provisions of the tax limitation amendment of 1978.

Senior Citizen Property Tax Deferment (P.A. 403)

Increases the income ceiling for which senior citizens can receive a deferment from special property assessments to $8,000 from $6,000, until 1983 when it will become $10,000. Sets a 12 percent penalty if it is found that the property was sold, but the deferment not lifted.

Wayne County Court Reorganization (P.A. 438-443)

Reorganize courts in Wayne County and provide for state assumption of operation and funding.

Tax Increment Financing (P.A. 448-450)

Permit municipalities to create tax increment financing authorities to aid local economic conditions.

Natural Resources

Renewable-Resource Power Production (P.A. 49 and 50)

Promote power production through the use of renewable resources by exempting such facilities, up to 30 megawatts, from Michigan Public Service Commission regulation.

Auto Emissions (P.A. 83 and 84)

Establish an emissions testing program in urban areas of more than 200,000 population, which do not meet the national air quality standards for ozone and carbon monoxide by December 31, 1982. Requires motorists to have certification that their vehicles passed the emissions test, that repairs were made, or that they qualify for an exemption, in order to purchase new license plates or stickers. The emissions package thus ensures that industrial development will not cease because of the withholding of federal air quality permits.

Electric Lifeline Rate Restructuring (P.A. 139)

Creates a lifeline rate structure for electric utilities by establishing a basic needs block of power, with additional blocks becoming more expensive as used. This rate structure encourages the conservation of energy by making increased use of energy more costly.

Land Conservation Easements (P.A. 197)

Authorizes a governmental, charitable, or educational entity to limit the use of a parcel of land, a body of water, or a historical site through conservation and historic preservation easements. The act is designed to encourage landowners to donate important sites, knowing that their gift or sale of property will be protected under law and used in accordance with the owner's wishes.

State Taxation and Economic Development

Chrysler Loan (P.A. 30 and 31)

Provide the structure for the state to loan the financially ailing Chrysler Corporation $150 million from the state's common cash fund or six state pensions funds, using Chrysler's Trenton engine plant for collateral.

State Revenue Limit (P.A. 34)

Implements the tax limitation amendment by establishing the state revenue limit, defining total state revenues, and specifying that the August personal income data issued by the U.S. Department of Commerce will be the official personal income for the state in the previous calendar year. Prohibits the Legislature from enacting taxes which exceed the revenue limit and outlines tax refund provisions.

Grain Tax Repeal (P.A. 68)

Repeals the specific tax on grain, effective April 3, 1980, in line with the single business tax which treats grain as inventory.

Liquor Pricing (P.A. 73)

Increases markup of liquor from 48 to 51 percent and increases the distributors' discount from 15 to 17 percent to give greater profits to liquor retailers and ensure that the state's share of revenues remains approximately the same.

Hunting and Fishing License Fees (P.A. 86)

Increases hunting and fishing license fees for both 1980 and 1981 to prevent deficits in the Game and Fish Fund and to finance an anti-poaching program.

Tax Limit Violations (P.A. 110)

Implements the tax limitation amendment of 1978. Permits taxpayers to file suit in circuit courts alleging violations of the tax limitation amendment.

Diesel Fuel Tax Package (P.A. 117-119)

Aid border truck-stop owners by lowering the diesel fuel tax on large trucks to 5¢ per gallon, from 9¢ per gallon. Replaces the lost revenue by increasing the diesel fuel tax on other vehicles to 11¢ per gallon, creating a truck-permit system, and instituting an enforceable mandatory Michigan fuel-purchase program for large trucks.

Farm Tax Rebate Interest (P.A. 133)

Allows the state treasurer to pay interest on tax rebates due under the Farmland and Open Space Preservation Act. Permits interest of 9 percent, if the rebate is paid late by the state.

Uniform Tax Collection Procedures (P.A. 162-169)

Establish a uniform system of collections, enforcement, and penalties for the various state taxes.

Auto Sales Tax Holiday (P.A. 186)

Cut the sales tax rate from 4 to 2 percent for American automobiles and several foreign models from June 27 through July 31, 1980, if the manufacturer offered an equal price reduction. This legislation was designed to stimulate lagging auto sales.

Beer Tax (P.A. 209)

Exempts beer from the sales tax if consumed on manufacturer's property or not offered for sale.

College Contribution Credit (P.A. 318)

Amends the single business tax to remove the expiration date for the tax credit for contributions to nonprofit organizations associated with institutions of higher education. Permits credits for contributions made to a public broadcasting system which is not affiliated with an institution of higher learning.

Railroad Tax Credit (P.A. 322)

Eliminates December 31, 1981 expiration date on property tax credits for maintenance and improvement of railroad rights of way.

Horse Racing Reform (P.A. 327)

Alters taxation of horse-race wagering and increases the share of total state horse-race wagering tax revenue returned to the horse-racing industry. Gives the state racing commissioner new authority to issue and revoke licenses, authorize additional track security, and prevent the use of drugs in connection with racing.

Gasohol Tax Reduction (P.A. 333)

Adds gasohol to the gasoline tax act and establishes a 6¢ per gallon tax rate, compared with 11¢ for gasoline, to make the gasoline-alcohol

blend more competitive and encourage its use. The rate will gradually rise, as use becomes wide-spread, reaching 11¢ per gallon in 1985.

Property Tax Credit (P.A. 352)

Reduces the property tax credits provided to recipients of general assistance or aid to families with dependent children. The credit will be reduced by the percentage that public assistance benefits are of total income.

Property Tax Incentives (P.A. 348)

Makes property tax incentives available for rehabilitated housing in downtown development districts in income tax cities.

Workers' Compensation Reform (P.A. 357)

Reforms workers' compensation system by increasing benefit levels and eliminating abuses. Requires greater proofs of eligibility before benefits could be awarded to retirees, or for conditions which could be the result of normal aging, or for certain mental and emotional problems. Specifies that workers' and unemployment compensation cannot be collected for the same period. Establishes a two-year statute of limitations.

Unemployment Compensation Reform (P.A. 358)

Denies jobless benefits to persons who voluntarily quit or are fired for misconduct. Increases from 14 to 18 the number of weeks a person must work to qualify for benefits. Sets a single scale for benefits, rather than basing benefits on the number of dependents of a worker. Increases benefit levels to 70 percent of after-tax income.

Commercial Forest Tax (P.A. 393)

Revises the commercial forest reserve act which exempts commercial forests from the property tax upon certification that the land has enough growth to produce marketable lumber. Doubles the specific tax to 30¢ per acre on property enrolled in the program. Discourages use of the program as a tax shelter and encourages actual production of timber by requiring persons removing forests from the program to pay a penalty equal to the average property tax on timber-cutover for up to seven previous years, rather than a penalty of 3¢ an acre. Increases state payment to local units and permits exploration for minerals.

Minority Procurement (P.A. 428)

Provides the procurement policy for each state department include certain expenditures to be awarded to businesses owned by minorities and women. Allows a 10 percent differential contract bid for minority-and women-owned businesses.

Child Care Credit (P.A. 468)
Allows businesses a single business tax credit for providing child care facilities for employees.

Small Business Development (P.A. 464)
Creates a small business development program within the Office of Economic Development to provide information and technical services to small businesses.

Artists' Inheritance Tax Deferral (P.A. 474)
Permits a 10 year inheritance tax deferral to the heirs of professional artists to allow them time to raise the tax without selling works of art and deflating their value or breaking up large collections of artwork.

Artwork Tax Credit (P.A. 475)
Makes a technical correction in the existing higher education tax credit to permit artists to receive an income tax credit for donations of their works.

City Income and Property Tax Credits (P.A. 517)
Extends the deadline for claiming a city income or property tax credit to four years, making these deadlines consistent with the Uniform Tax Collections Act.

Transportation

Weight Tax Exemption (P.A. 106)
Exempts intercity and transportation region buses from the vehicle weight tax and allows the same reduced flat-rate license fee as has been available to city and suburban buses.

Wages and Employment

Chemical Safety Information (P.A. 51)
Requires employers to post safety information listing the chemical substances with which employees must work or to which they may be exposed in the workplace.

Handicapper Truck Drivers (P.A. 71)
Allows qualified handicappers to drive trucks.

Sexual Harassment (P.A. 202)
Prohibits sexual harassment of employees or persons seeking employment; or in obtaining housing, education, and public services.

Youth Supervision (P.A. 436)
Requires adult supervision of employees who are minors.

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Note: Detail in these tables will not necessarily add to totals because of rounding. Unless otherwise noted, all dollar figures are in current dollars.

TABLE C-1
Michigan Labor Force and Employment Estimates, 1970-1980
(Thousands)

Year	Total Labor Force	Employed[1]	Unemployed[2]	Percent Unemployed	Wage and Salary Workers	Workers Involved in Labor-Management Disputes
1970	3,596.0	3,356.0	241.0	6.7	3,003.5	35.9
1971	3,621.0	3,345.0	277.0	7.6	2,995.5	10.4
1972	3,705.0	3,445.0	260.0	7.0	3,114.9	2.8
1973	3,808.0	3,587.0	221.0	5.8	3,282.3	4.9
1974	3,883.0	3,595.0	288.0	7.4	3,278.2	10.5
1975	3,901.0	3,414.0	487.0	12.5	3,136.1	3.5
1976	4,000.0	3,626.0	374.0	9.4	3,231.2	6.4
1977	4,124.0	3,786.0	337.0	8.2	3,434.7	6.9
1978	4,202.0	3,913.0	289.0	6.9	3,568.8	5.4
1979	4,313.0	3,978.0	335.0	7.8	3,627.9	5.2
1980	4,315.0	3,781.0	534.0	12.4	3,462.8	6.6
1979: January	4,250.0	3,909.0	341.0	8.0	3,611.3	4.1
February	4,280.0	3,929.0	351.0	8.2	3,620.6	1.4
March	4,282.0	3,941.0	341.0	8.0	3,642.8	1.5
April	4,244.0	3,879.0	365.0	8.6	3,621.1	2.0
May	4,316.0	4,006.0	310.0	7.2	3,682.1	3.8
June	4,372.0	4,056.0	316.0	7.2	3,684.8	6.7
July	4,391.0	4,053.0	338.0	7.7	3,614.5	3.8
August	4,307.0	3,983.0	324.0	7.5	3,548.0	4.6
September	4,315.0	4,006.0	309.0	7.2	3,618.1	25.1
October	4,327.0	4,013.0	314.0	7.3	3,645.3	4.4
November	4,353.0	4,009.0	344.0	7.9	3,618.8	1.8
December	4,323.0	3,955.0	368.0	8.5	3,626.4	2.6
1980: January	4,266.0	3,827.0	439.0	10.3	3,506.1	1.3
February	4,287.0	3,806.0	481.0	11.2	3,496.4	7.3
March	4,239.0	3,773.0	466.0	11.0	3,505.3	4.6
April	4,233.0	3,710.0	523.0	12.4	3,444.4	4.1
May	4,321.0	3,714.0	607.0	14.0	3,423.4	5.0
June	4,413.0	3,793.0	620.0	14.0	3,431.8	5.1
July	4,373.0	3,757.0	617.0	14.1	3,355.5	16.8
August	4,367.0	3,820.0	547.0	12.5	3,378.9	8.4
September	4,319.0	3,803.0	516.0	11.9	3,444.9	12.8
October	4,330.0	3,805.0	525.0	12.1	3,502.3	6.0
November	4,321.0	3,782.0	540.0	12.5	3,529.2	4.3
December	4,303.0	3,779.0	524.0	12.2	3,535.8	3.4

[1]Includes agricultural and nonagricultural employment. Excludes those involved in labor-management disputes.

[2]Excludes the potential or latent supply of workers not active in the labor market and workers directly involved in labor-management disputes.

Source: Michigan Employment Security Commission.

TABLE C-5
Wage and Salary Workers in Government, Michigan, 1970-1980
(Thousands)

Year	Total Government Employment	Federal Government	State Government	Local Government
1970	506.5	57.7	115.9	333.0
1971	509.4	54.8	117.8	336.8
1972	526.6	55.2	122.4	349.0
1973	534.3	55.0	123.9	355.4
1974	562.5	56.2	127.5	378.8
1975	583.1	56.1	132.6	394.4
1976	593.7	55.5	134.3	403.9
1977	596.7	54.7	136.8	405.2
1978	617.7	55.0	142.8	419.9
1979	623.0	56.0	150.3	416.7
1980	634.0	56.9	154.5	422.6
1979: January	614.9	55.8	149.5	409.3
February	631.5	55.7	155.0	420.8
March	632.6	55.8	153.8	423.0
April	626.2	55.7	153.3	417.2
May	627.9	55.9	150.3	421.7
June	617.3	57.5	144.2	415.6
July	603.9	57.5	136.7	409.7
August	601.2	57.0	137.1	407.1
September	600.9	55.8	150.9	394.2
October	636.5	55.3	157.5	423.7
November	640.4	54.7	157.7	428.0
December	642.4	55.3	157.3	429.8
1980: January	629.8	55.0	155.8	419.0
February	648.4	54.9	160.9	432.6
March	648.5	56.4	158.4	433.7
April	641.4	56.8	160.2	424.4
May	650.8	57.5	156.0	437.3
June	634.4	59.2	148.7	426.4
July	608.4	59.6	142.1	406.7
August	608.3	58.4	142.3	407.6
September	609.5	56.8	146.4	406.3
October	640.9	56.3	160.6	424.0
November	645.1	55.9	161.1	428.1
December	642.3	56.3	161.0	425.0

Source: Michigan Employment Security Commission.

TABLE C-6
Quarterly Michigan Labor Force, Employment and Unemployment, 1973-1980
(Thousands)

Year Quarter:	Labor Force	Employment	Unemployment	Percent Unemployed
1973: I	3,744	3,470	274	7.3
II	3,787	3,580	207	5.5
III	3,840	3,637	203	5.3
IV	3,862	3,658	204	5.3
1974: I	3,866	3,589	277	7.2
II	3,850	3,581	269	7.0
III	3,916	3,633	283	7.2
IV	3,903	3,578	325	8.3
1975: I	3,920	3,356	564	14.4
II	3,888	3,365	523	13.5
III	3,899	3,432	467	12.0
IV	3,899	3,501	398	10.2
1976: I	3,933	3,519	414	10.5
II	3,981	3,593	388	9.7
III	4,053	3,685	368	9.1
IV	4,033	3,707	326	8.1
1977: I	4,076	3,690	386	9.5
II	4,099	3,783	316	7.7
III	4,151	3,798	353	8.5
IV	4,171	3,876	295	7.1
1978: I	4,161	3,849	312	7.5
II	4,195	3,912	283	6.7
III	4,214	3,918	296	7.0
IV	4,239	3,973	266	6.3
1979: I	4,271	3,926	344	8.1
II	4,311	3,980	330	7.7
III	4,338	4,014	324	7.5
IV	4,334	3,992	342	7.9
1980: I	4,264	3,802	462	10.8
II	4,322	3,739	583	13.5
III	4,353	3,793	560	12.9
IV	4,318	3,789	530	12.3

Source: Michigan Employment Security Commission.

TABLE C 7
Employment and Unemployment Rates for Michigan SMSAs and Counties, 1979 and 1980

Area	1979 Number Employed	1979 Unemployment Rate	1980[1] Number Employed	1980[1] Unemployment Rate
Michigan	3,978,300	7.8	3,781,000	12.4
SMSA				
Ann Arbor-Ypsilanti	134,400	5.9	129,725	8.3
Battle Creek	74,800	6.8	71,650	11.4
Benton Harbor	68,000	8.8	64,150	12.7
Detroit	1,887,700	7.8	1,772,575	12.9
Flint	204,500	8.7	187,425	17.8
Grand Rapids	292,300	5.4	287,625	8.4
Jackson	63,600	7.2	59,050	11.4
Kalamazoo-Portage	125,900	5.7	123,975	8.5
Lansing-East Lansing	219,300	6.6	214,475	10.4
Muskegon-Muskegon Heights	69,800	8.8	67,825	13.2
Saginaw	95,500	7.6	88,050	14.4
Upper Peninsula	123,100	10.4	124,350	11.8
County				
Alcona	2,725	14.8	2,500	19.4
Alger	3,050	12.9	3,075	14.6
Allegan	32,000	6.6	31,175	11.0
Alpena	13,600	11.3	13,050	14.3
Antrim	6,700	10.1	6,150	16.0
Arenac	5,950	8.5	4,925	15.2
Baraga	2,975	11.2	2,925	12.8
Barry	17,475	5.5	16,750	10.5
Bay	47,300	7.6	45,200	15.1
Benzie	3,900	12.4	3,800	15.6
Berrien	68,000	8.8	64,150	12.7
Branch	21,375	7.8	18,850	13.4
Calhoun	57,300	7.2	54,900	11.6
Cass	22,375	7.5	19,875	12.0
Charlevoix	9,000	9.1	7,700	15.2
Cheboygan	9,025	14.7	8,300	18.2
Chippewa	9,425	18.0	9,525	17.9
Clare	8,825	10.4	8,250	14.9
Clinton	26,350	5.9	25,775	9.8
Crawford	3,275	14.9	3,150	15.3
Delta	14,775	11.0	15,300	11.5
Dickinson	11,275	6.8	11,300	8.5
Eaton	39,350	5.8	38,450	9.9
Emmet	12,275	9.4	11,500	11.6
Genesee	176,950	8.9	162,150	18.1
Gladwin	7,375	9.8	7,400	13.0
Gogebic	8,175	7.4	9,250	7.2
Grand Traverse	25,650	6.1	25,150	9.2
Gratiot	14,900	10.1	14,350	13.6
Hillsdale	19,500	7.6	17,125	12.1
Houghton	12,400	10.3	13,600	10.8
Huron	12,600	9.4	11,750	16.2

TABLE C-7 (Continued)
Employment and Unemployment Rates for Michigan SMSAs and Counties, 1979 and 1980

Area	1979 Number Employed	1979 Unemployment Rate	1980[1] Number Employed	1980[1] Unemployment Rate
Ingham	129,875	6.7	126,950	10.3
Ionia	23,825	8.5	23,275	11.8
Iosco	8,975	10.7	8,175	14.6
Iron	5,475	9.1	5,400	11.0
Isabella	25,150	6.4	30,050	8.3
Jackson	63,600	7.2	59,050	11.4
Kalamazoo	96,875	5.2	95,400	7.9
Kalkaska	6,050	6.6	5,925	9.0
Kent	217,725	5.6	214,200	8.7
Keweenaw	725	14.7	800	13.2
Lake	2,450	11.7	2,650	15.7
Lapeer	28,875	6.9	27,125	12.6
Leelanau	7,100	7.8	6,975	9.5
Lenawee	36,875	7.8	34,350	14.0
Livingston	39,725	5.8	37,300	11.7
Luce	2,650	11.7	2,725	12.3
Mackinac	5,250	17.3	5,650	15.1
Macomb	298,400	8.4	280,200	13.5
Manistee	9,125	9.2	8,450	12.7
Marquette	30,675	8.6	28,900	11.6
Mason	11,175	10.8	10,925	13.0
Mecosta	13,125	7.4	13,025	9.3
Menominee	10,250	7.0	10,000	9.2
Midland	28,050	6.9	28,200	9.0
Missaukee	3,750	9.6	3,450	15.6
Monroe	57,325	9.4	56,575	11.5
Montcalm	16,650	10.0	16,275	15.0
Montmorency	2,650	14.5	2,050	25.1
Muskegon	61,650	8.7	59,900	13.1
Newaygo	11,225	10.7	11,250	15.2
Oakland	434,400	5.7	407,900	10.8
Oceana	8,150	9.7	7,925	13.5
Ogemaw	6,825	9.7	6,300	14.0
Ontonagon	2,725	12.8	2,950	12.7
Osceola	6,525	9.4	6,650	13.8
Oscoda	1,825	16.1	1,775	19.6
Otsego	8,475	6.9	7,825	9.0
Ottawa	74,650	4.5	73,425	7.6
Presque Isle	3,625	14.7	3,600	19.0
Roscommon	5,250	11.8	5,350	13.8
Saginaw	95,500	7.6	88,050	14.4
St. Clair	57,450	8.2	53,950	12.2
St. Joseph	22,350	10.5	22,325	11.6
Sanilac	13,850	11.8	13,000	18.2
Schoolcraft	3,225	14.6	3,300	13.3
Shiawassee	27,575	7.8	25,275	16.0
Tuscola	23,900	8.6	22,325	15.9
Van Buren	29,025	7.3	28,575	10.2
Washtenaw	134,400	5.9	129,725	8.3
Wayne	1,028,800	8.6	966,075	13.7
Wexford	8,775	11.1	8,075	16.4

[1]Average of January to November data.

Source: Michigan Employment Security Commission.

TABLE C-8
Average Weekly and Hourly Earnings in Manufacturing Industries, Michigan and U.S., 1961-1980

Year	Michigan			United States		
	Average Weekly Earnings	Average Hourly Earnings	Real Average Weekly Earnings (1967 Dollars)	Average Weekly Earnings	Average Hourly Earnings	Real Average Weekly Earnings (1967 Dollars)
1961	$112.32	$ 2.80	$126.63	$ 92.34	$2.32	$103.06
1962	121.43	2.91	136.59	96.56	2.39	106.58
1963	128.27	3.02	142.84	99.63	2.46	108.65
1964	135.11	3.11	149.29	102.97	2.53	110.84
1965	143.69	3.22	155.28	107.53	2.61	113.79
1966	145.10	3.35	150.05	112.34	2.72	115.58
1967	145.78	3.47	145.78	114.90	2.83	114.90
1968	164.15	3.79	157.38	122.51	3.01	117.57
1969	166.78	3.97	150.80	129.51	3.19	117.95
1970	168.22	4.14	143.29	133.33	3.35	114.99
1971	187.72	4.59	154.25	142.44	3.57	117.34
1972	211.52	4.94	167.61	154.71	3.82	123.46
1973	228.63	5.27	169.99	166.46	4.89	124.76
1974	232.03	5.63	155.62	176.80	4.42	119.43
1975	250.76	6.15	156.43	190.79	4.83	117.56
1976	290.97	6.81	172.27	209.32	5.22	121.76
1977	326.27	7.54	180.86	228.90	5.68	125.00
1978	346.20	8.07	178.36	249.27	6.17	127.57
1979	359.72	8.73	164.41	268.94	6.69	123.71
1980	382.22	9.53	150.78	288.16	7.27	116.76
1979: January	363.89	8.56	177.42	262.28	6.46	128.13
February	369.71	8.62	177.06	264.31	6.51	127.62
March	374.54	8.69	177.00	266.34	6.56	127.37
April	320.15	8.58	150.16	256.50	6.56	121.28
May	369.50	8.76	172.74	267.33	6.65	124.86
June	363.74	8.70	168.87	267.87	6.68	123.67
July	361.15	8.79	164.53	270.14	6.72	123.41
August	348.75	8.61	156.95	270.27	6.74	122.24
September	354.80	8.74	158.61	272.56	6.78	122.01
October	365.15	8.91	160.72	274.16	6.82	121.63
November	347.82	8.87	150.38	275.49	6.87	121.09
December	380.77	9.07	163.28	277.78	6.91	120.83
1980: January	361.88	9.05	152.56	279.28	6.93	119.76
February	364.21	9.13	151.50	280.30	6.99	118.57
March	375.76	9.32	154.70	280.99	7.06	117.18
April	366.91	9.24	147.83	282.98	7.11	116.69
May	361.50	9.15	145.53	281.00	7.15	114.74
June	369.29	9.35	143.86	282.30	7.22	114.01
July	373.43	9.43	147.19	284.70	7.30	114.89
August	371.61	9.38	145.67	289.98	7.36	116.27
September	386.40	9.64	148.90	293.83	7.42	116.74
October	407.87	9.95	154.32	296.60	7.49	116.82
November	408.63	9.99	153.39	299.74	7.55	116.99
December[1]	439.19	10.71	162.84	306.25	7.61	118.52

[1] Preliminary.

Source: Michigan Employment Security Commission.

TABLE C-2
Wage and Salary Workers in Manufacturing, Durable Goods Industries, Michigan, 1970-1980
(Thousands)

Year	Total Manufacturing	Total Durable Goods Manufacturing	Lumber and Wood Products	Furniture and Fixtures	Primary Metal Products	Fabricated Metal Products	Non-electrical Machinery	Electrical Machinery	Motor Vehicles and Equipment	Other Transportation Equipment	Other Durable Goods
1970	1,080.1	861.6	13.3	20.8	90.0	140.5	162.9	42.3	335.3	14.2	41.8
1971	1,057.7	845.5	14.0	19.6	87.2	139.5	137.8	40.3	353.6	13.6	39.9
1972	1,094.4	876.8	15.1	20.8	87.7	145.7	140.3	42.3	369.5	14.0	41.4
1973	1,177.2	952.1	16.6	22.6	95.5	156.5	155.8	47.0	401.1	14.3	43.3
1974	1,114.0	897.2	15.5	21.9	93.9	141.6	158.1	45.4	366.1	11.5	43.2
1975	983.7	778.2	12.8	18.6	79.5	120.4	136.6	38.2	321.2	11.6	39.3
1976	1,058.9	844.9	14.0	19.9	85.7	137.6	137.4	39.4	357.9	12.8	40.2
1977	1,120.2	897.8	14.4	20.0	91.6	145.7	150.6	40.9	378.5	13.6	42.5
1978	1,153.3	927.5	14.2	21.0	92.7	151.0	161.1	42.3	389.0	14.0	42.2
1979	1,151.2	928.3	14.1	22.9	87.7	149.9	166.3	41.3	389.8	13.4	42.7
1980	990.6	786.9	11.4	21.0	69.0	122.8	153.6	38.4	319.9	10.9	39.9
1979: January	1,198.3	970.7	14.2	22.4	93.3	159.2	166.7	42.2	416.0	14.2	42.5
February	1,196.2	970.4	14.1	22.7	93.3	159.1	167.4	43.7	413.3	14.5	42.3
March	1,196.5	971.5	14.4	22.9	93.3	158.1	168.2	43.4	414.4	14.3	42.6
April	1,178.2	953.8	14.6	23.5	92.1	157.0	167.8	42.9	398.4	14.3	43.2
May	1,195.2	971.6	14.7	23.2	92.1	158.1	167.1	43.1	416.5	14.0	42.8
June	1,185.6	961.8	14.7	23.7	91.2	156.7	167.5	43.0	407.4	13.6	44.0
July	1,134.9	915.4	14.3	22.6	87.6	144.9	163.0	40.2	386.9	13.2	42.7
August	1,070.5	848.7	14.4	22.9	83.8	136.6	163.7	37.4	335.1	12.5	42.3
September	1,137.2	913.6	14.0	22.8	85.1	143.3	166.6	40.9	385.1	12.9	42.9
October	1,122.9	899.2	13.8	22.9	81.9	143.4	165.8	40.9	375.7	12.6	42.2
November	1,094.8	877.3	13.5	22.9	80.0	142.4	166.3	39.0	358.6	12.5	42.1
December	1,103.5	885.2	12.6	22.8	78.7	140.2	165.3	41.5	369.9	12.4	41.8
1980: January	1,055.5	843.8	12.1	22.4	78.9	130.9	164.0	39.1	342.8	12.3	41.3
February	1,041.8	832.3	12.0	22.4	79.1	126.8	162.2	40.6	336.5	12.0	40.7
March	1,041.3	830.8	11.5	22.4	78.1	132.2	159.8	40.4	334.5	11.7	40.2
April	981.4	777.8	11.6	22.1	71.9	127.7	157.0	37.6	299.7	10.8	39.4
May	934.6	735.8	11.4	20.6	66.5	117.7	155.6	36.9	277.0	10.2	39.9
June	951.1	750.6	11.3	20.4	64.4	113.2	153.0	37.1	301.3	10.3	39.6
July	911.7	721.0	10.7	18.6	60.2	107.5	148.4	37.0	289.5	10.3	38.8
August	928.5	728.3	11.2	20.0	59.5	114.0	144.7	36.2	292.2	10.5	40.0
September	978.2	773.3	11.0	20.5	64.6	120.3	148.3	38.3	319.5	10.7	40.1
October	1,008.1	804.5	11.3	20.8	67.0	125.3	147.9	38.5	343.5	10.6	39.6
November	1,026.5	821.6	11.6	20.7	69.3	129.2	150.5	39.0	350.7	10.4	40.2
December	1,028.0	823.1	11.3	20.6	68.8	128.6	152.0	40.2	351.7	10.4	39.5

Source: Michigan Employment Security Commission.

TABLE C-3
Wage and Salary Workers in Manufacturing, Nondurable Goods Industries, Michigan, 1970-1980
(Thousands)

Year	Total Manufacturing	Total Nondurable Goods Manufacturing	Food and Kindred Products	Textile Mill Products and Apparel	Paper and Allied Products	Printing, Publishing and Allied	Chemicals, Petroleum and Related	Other Nondurable Goods
1970	1,080.1	218.5	54.6	22.8	28.9	34.5	44.4	33.2
1971	1,057.7	212.2	53.4	23.9	26.7	34.2	44.5	29.5
1972	1,094.4	217.6	52.3	24.6	26.5	36.7	44.2	33.3
1973	1,177.2	225.1	51.8	27.0	26.9	36.8	45.2	37.4
1974	1,114.0	216.8	51.8	24.7	26.3	35.5	44.3	34.2
1975	983.7	205.5	51.5	22.2	23.5	34.5	45.9	27.9
1976	1,058.9	214.0	51.0	25.9	24.1	32.7	47.4	32.9
1977	1,120.2	222.4	51.9	27.3	24.3	32.3	49.6	37.0
1978	1,153.3	225.8	52.5	27.6	23.0	33.4	49.6	39.7
1979	1,151.2	222.9	52.3	25.6	23.8	34.2	47.4	39.6
1980	990.6	203.6	51.3	18.6	21.7	32.9	44.8	34.3
1979: January	1,198.3	227.6	51.8	28.5	24.2	33.9	47.5	41.7
February	1,196.2	225.8	50.0	27.9	24.1	34.0	47.6	42.2
March	1,196.5	225.0	49.5	27.6	24.0	34.2	47.6	42.1
April	1,178.2	224.4	49.3	28.0	23.9	34.5	47.8	40.9
May	1,195.2	223.6	50.3	28.0	24.1	34.3	47.6	39.3
June	1,185.6	223.8	51.8	25.6	24.5	34.7	48.0	39.2
July	1,134.9	219.5	53.1	22.1	23.9	33.9	47.7	38.8
August	1,070.5	221.8	55.6	21.8	24.2	34.5	47.5	38.2
September	1,137.2	223.6	56.2	24.3	23.6	34.2	47.0	38.3
October	1,122.9	223.7	54.9	25.9	23.2	33.9	47.3	38.5
November	1,094.8	217.5	53.0	23.2	23.0	34.0	46.6	37.7
December	1,103.4	218.3	52.1	24.5	23.3	34.1	47.0	37.3
1980: January	1,055.5	211.7	51.1	20.8	23.1	33.6	46.3	36.8
February	1,041.8	209.5	49.5	21.1	23.3	33.5	45.8	36.3
March	1,041.3	210.5	50.3	21.6	22.9	32.9	45.6	37.2
April	981.3	203.6	49.7	18.1	22.9	32.7	45.4	34.8
May	934.6	198.8	51.2	17.1	21.7	32.1	44.7	32.0
June	951.1	200.5	52.0	17.9	21.8	32.5	44.5	31.8
July	911.7	190.7	50.8	13.3	20.3	32.7	44.7	28.9
August	928.5	200.2	53.3	16.5	21.0	32.7	44.5	32.2
September	978.2	204.9	54.2	18.5	20.6	33.0	44.3	34.3
October	1,008.1	203.6	51.7	18.9	20.9	32.5	44.4	35.2
November	1,026.5	204.9	51.7	19.5	20.7	33.1	43.8	36.1
December	1,028.0	204.9	50.5	19.5	21.0	33.7	43.9	36.3

Source: Michigan Employment Security Commission.

TABLE C-4
Wage and Salary Workers in Nonmanufacturing Industries, Michigan, 1970-1980
(Thousands)

Year	Total Non-manufacturing Industries	Construction	Transportation, Communication, & Utilities	Wholesale Trade	Retail Trade	Finance, Real Estate, & Insurance	Services	Mining
1970	1,416.8	119.2	149.1	144.7	457.0	119.6	415.4	11.8
1971	1,428.4	121.3	146.9	144.7	459.1	120.9	424.4	11.1
1972	1,493.9	128.6	146.7	145.9	477.7	127.4	455.5	12.1
1973	1,570.8	132.7	152.4	150.6	503.0	130.2	489.0	12.9
1974	1,601.7	127.6	151.9	153.5	510.9	134.2	510.2	13.4
1975	1,569.3	106.3	143.5	146.8	509.6	134.0	515.3	13.8
1976	1,578.6	107.0	141.3	130.5	510.8	132.3	544.6	12.1
1977	1,717.8	122.8	150.2	151.8	557.1	142.2	581.6	12.1
1978	1,797.8	138.9	151.8	162.9	577.7	145.7	609.0	11.0
1979	1,853.7	139.8	158.8	172.1	585.2	153.3	631.1	13.4
1980	1,838.3	121.6	153.5	166.8	582.8	156.5	644.1	13.0
1979: January	1,798.4	118.9	158.3	171.8	573.6	149.4	613.6	12.8
February	1,792.9	114.9	158.3	171.8	565.8	149.7	619.6	12.8
March	1,813.7	119.9	159.5	173.5	572.0	151.0	624.7	13.1
April	1,816.7	129.4	146.7	171.9	579.3	151.2	624.8	13.4
May	1,859.0	139.4	160.7	173.2	587.8	152.8	631.5	13.6
June	1,881.9	148.4	161.9	174.8	590.8	155.1	637.1	13.8
July	1,875.7	153.7	160.5	172.3	583.2	155.9	636.3	13.8
August	1,876.3	157.1	159.4	171.9	584.6	155.8	633.8	13.7
September	1,880.0	154.6	160.1	172.3	588.1	154.2	637.0	13.7
October	1,885.9	155.8	161.0	171.7	589.6	154.2	640.1	13.5
November	1,883.6	148.7	159.4	169.6	599.0	154.6	638.8	13.5
December	1,880.5	136.2	159.6	171.0	609.2	155.3	636.1	13.1
1980: January	1,820.8	117.4	156.1	171.5	576.9	155.5	630.4	13.0
February	1,806.2	112.3	155.4	167.4	567.1	155.5	635.4	13.1
March	1,815.5	111.5	155.9	168.4	572.3	155.6	638.8	13.0
April	1,821.6	117.0	153.6	166.9	573.6	155.5	641.4	13.6
May	1,838.0	123.2	153.4	165.7	584.3	156.7	640.8	13.9
June	1,846.4	123.7	153.6	168.6	586.5	156.9	643.1	14.0
July	1,835.4	124.2	152.0	163.9	581.8	157.5	643.7	12.3
August	1,842.1	126.0	151.9	165.7	582.4	157.9	646.6	11.6
September	1,857.2	129.2	152.4	166.2	585.3	157.2	655.3	11.6
October	1,853.3	130.3	152.7	165.2	582.2	156.8	652.8	13.3
November	1,857.6	126.3	152.9	165.8	591.9	156.3	650.9	13.5
December	1,865.5	118.1	152.4	166.0	609.0	156.6	650.4	13.0

Source: Michigan Employment Security Commission.

TABLE C-9
Average Weekly Earnings in Selected Manufacturing Industries, Michigan, 1968-1980

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Manufacturing Industries	$164.15	$166.78	$168.22	$187.72	$211.52	$228.63	$232.03	$250.76	$290.97	$326.27	$346.20	$359.72	$382.22
Durable goods	168.87	170.67	171.45	192.26	217.80	235.79	239.66	258.53	302.14	340.16	359.69	373.10	396.17
Basic lumber products	97.42	101.14	105.61	113.36	118.80	128.14	136.26	147.72	164.68	171.62	199.06	212.96	224.91
Furniture	118.40	130.22	135.32	147.71	159.34	164.55	175.78	181.16	198.62	222.20	238.90	251.50	268.17
Primary metals	166.58	162.41	170.55	194.07	217.94	243.12	256.15	268.20	319.81	357.01	390.99	397.07	420.35
Fabricated metals	172.99	176.38	174.07	179.02	204.50	221.19	222.41	240.64	285.85	324.34	334.09	337.88	359.03
Nonelectrical machinery	164.04	177.65	178.31	188.83	216.19	238.46	247.48	253.01	279.47	319.50	348.29	381.82	404.29
Electrical machinery	138.65	147.22	150.27	174.64	193.76	196.51	207.58	221.51	251.75	284.96	309.48	300.75	321.50
Transportation equipment	181.97	178.08	179.01	207.35	237.67	255.55	255.99	284.17	334.89	378.11	394.14	409.09	437.11
Nondurable goods	141.46	149.14	152.41	166.41	182.81	191.62	198.43	218.67	241.69	267.46	285.94	302.90	324.18
Food and kindred products	134.56	146.41	151.21	160.41	176.12	187.17	203.33	224.80	244.40	263.38	280.57	305.54	329.94
Textiles and apparel	154.94	147.61	138.49	169.86	191.52	200.83	207.44	227.62	258.26	303.92	324.85	331.47	345.99
Paper	140.79	147.60	153.52	172.23	191.44	201.87	212.53	225.55	253.78	282.90	312.99	329.36	352.50
Printing and publishing	143.44	157.69	163.54	168.98	185.05	189.39	197.48	212.99	231.08	248.78	267.20	285.82	299.27
Chemicals	152.66	161.87	166.92	184.66	201.49	210.16	218.89	247.68	276.98	313.47	338.56	355.32	372.60

Source: Michigan Employment Security Commission

TABLE C-10
Average Weekly Hours in Selected Manufacturing Industries, Michigan, 1968-1980

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Manufacturing Industries	43.3	42.0	40.6	40.9	42.8	43.4	41.2	40.8	42.7	43.3	42.9	41.2	40.1
Durable goods	43.5	42.1	40.6	40.9	43.0	43.9	41.4	40.9	43.0	43.7	43.3	41.4	40.1
Basic lumber products	39.3	39.2	39.0	39.0	38.9	39.2	38.4	38.6	39.3	39.5	39.1	38.6	37.9
Furniture	41.4	41.5	40.0	40.4	41.3	40.6	40.4	39.0	40.0	40.8	41.0	39.5	39.5
Primary metals	42.9	40.9	40.1	40.9	42.5	43.9	42.2	40.3	42.5	43.8	43.8	41.4	39.3
Fabricated metals	44.3	42.5	41.2	39.4	42.2	43.1	40.6	39.9	42.3	42.8	41.9	40.0	39.3
Nonelectrical machinery	43.1	43.8	41.4	40.2	42.7	44.2	43.1	41.0	41.7	43.1	43.4	43.3	42.1
Electrical machinery	41.6	41.8	40.9	42.2	43.0	42.6	41.7	40.6	42.0	43.0	42.9	40.5	40.7
Transportation equipment	44.2	41.9	40.4	41.5	43.9	44.7	41.0	41.6	44.6	44.8	44.3	41.6	40.1
Nondurable goods	42.0	41.6	40.3	40.8	41.7	41.2	40.3	40.3	41.1	41.7	41.5	40.5	40.4
Food and kindred products	40.9	41.3	40.9	40.7	41.4	41.0	41.4	41.7	41.8	41.9	41.2	41.3	41.6
Textile mill products and apparel	44.6	40.9	37.4	40.1	42.0	41.7	39.7	39.6	40.8	42.1	41.5	38.8	38.6
Paper	43.9	44.7	42.8	44.1	45.3	44.9	44.0	43.5	44.4	45.3	45.2	43.4	43.0
Printing and publishing	39.7	39.1	37.5	37.4	37.3	37.2	36.9	36.1	36.8	37.9	37.9	37.1	36.1
Chemicals	42.3	42.1	41.4	41.3	42.1	42.1	41.7	41.3	42.1	42.9	43.2	42.3	42.2

Source: Michigan Employment Security Commission.

TABLE C-11
Michigan Personal Income by Major Sources, 1971-1980
(Millions)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Wage and Salary Disbursements	$27,179.6	$30,305.0	$34,184.8	$35,514.0	$35,800.5	$41,075.5	$46,676.0	$52,694.5	$57,575.0	$57,964.0
Farm	95.3	101.8	106.8	125.3	115.3	124.8	140.6	146.0	170.0	185.0
Mining	113.8	130.8	150.3	174.5	200.3	205.3	211.8	250.3	285.0	297.0
Contract Construction	1,472.0	1,610.5	1,589.0	1,710.8	1,498.8	1,625.3	1,936.0	2,400.8	2,664.5	2,515.0
Manufacturing	11,377.8	12,858.3	15,033.3	14,823.0	14,156.0	17,429.5	20,383.0	22,860.3	24,332.5	22,308.0
Durable	9,372.5	10,677.8	12,651.0	12,349.8	11,643.3	14,516.0	17,096.3	19,265.5	20,452.8	18,467.0
Nondurable	2,005.3	2,180.5	2,382.3	2,473.3	2,512.8	2,913.5	3,286.8	3,594.8	3,879.8	3,841.0
Wholesale Trade	1,536.8	1,671.5	1,848.5	2,054.8	2,064.0	2,130.5	2,359.5	2,751.3	3,136.0	3,299.0
Retail Trade	2,626.8	2,865.3	3,122.3	3,323.0	3,456.0	3,814.3	4,195.5	4,681.0	5,044.3	5,296.0
Finance, Insur., Real Estate	975.0	1,060.8	1,150.3	1,266.3	1,346.0	1,461.0	1,620.8	1,853.8	2,086.5	2,284.0
Trans., Comm., Utilities	1,518.8	1,673.8	1,880.5	1,953.0	1,986.5	2,248.8	2,506.0	2,864.8	3,196.5	3,298.0
Services	3,843.3	3,418.3	3,839.5	4,249.0	4,513.9	5,222.5	5,931.8	6,815.7	7,589.8	8,637.0
Government	4,383.3	4,873.0	5,315.8	5,783.0	6,308.5	6,748.3	7,298.8	7,982.0	8,868.7	9,739.0
Federal Civilian	559.3	601.3	656.8	713.8	765.8	833.2	896.8	976.2	1,036.0	1,110.0
Federal Military	163.8	184.0	193.1	199.0	198.3	207.3	201.3	195.3	198.3	205.0
State and Local	3,660.3	4,087.8	4,465.5	4,870.3	5,344.5	5,707.8	6,200.8	6,810.5	7,634.5	8,415.0
Other Industries	37.3	41.3	46.8	51.5	55.8	65.5	73.0	88.7	101.3	106.0
Other Labor Income	2,381.8	2,683.3	3,244.8	3,465.8	3,859.8	4,834.0	5,848.3	6,791.7	7,688.3	7,803.0
Proprieters' Income	2,343.0	2,604.3	2,801.0	2,907.5	2,793.8	2,657.5	3,106.5	3,664.5	4,276.3	4,190.0
Farm	230.8	349.3	469.3	535.0	466.5	300.5	397.0	524.0	808.5	760.0
Nonfarm	2,112.3	2,255.0	2,331.8	2,372.5	2,327.3	2,357.0	2,709.5	3,140.5	3,467.8	3,430.0
Total Income by Place of Work	31,904.5	35,592.5	40,230.5	41,887.3	42,454.0	48,567.0	55,630.8	63,150.7	69,539.5	69,963.0
Less: Contributions for Soc. Ins.	1,292.8	1,469.3	1,928.8	2,071.8	2,120.8	2,387.0	2,657.0	3,003.0	3,512.3	3,547.0
Plus: Residence Adjustment	163.3	184.3	210.8	228.5	252.3	295.0	352.0	404.5	447.3	474.0
Net Income by Place of Residence	30,775.8	34,307.5	38,512.5	40,044.0	40,585.5	46,475.0	53,325.8	60,552.2	66,474.5	66,890.0
Plus: Dividends, Interest, Rent	4,584.8	4,838.3	5,175.5	5,861.0	6,330.3	7,022.5	7,802.0	8,728.0	9,995.7	11,695.0
Plus: Transfer Payments	3,829.6	4,287.0	4,780.0	5,945.5	7,822.2	8,104.0	8,440.7	8,890.2	10,102.6	12,629.0
Total Personal Income by Residence	$39,190.1	$43,432.7	$48,468.0	$51,850.5	$54,738.0	$61,601.5	$69,568.5	$78,170.5	$86,572.9	$91,214.0
Total Real Personal Income (1967 Dollars)	$32,202.2	$34,415.8	$36,035.7	$34,775.7	$34,147.2	$36,472.2	$38,563.5	$40,273.3	$39,557.1	$35,982.0

Source: U.S. Department of Commerce, Bureau of Economic Analysis. 1980 estimates by Michigan Department of Management and Budget.

TABLE C-12
Quarterly Michigan Personal Income by Major Source, 1974-1979
(Millions)

	1974				1975				1976			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Wage and Salary Disbursements	$ 8,492.4	$ 8,688.1	$ 9,046.1	$ 9,287.4	$ 8,394.6	$ 8,658.9	$ 9,014.8	$ 9,732.3	$ 9,542.7	$10,125.0	$10,268.5	$11,139.3
Farm	27.1	25.8	36.8	35.6	26.8	23.7	32.1	32.7	27.0	26.1	35.4	36.3
Mining	37.8	43.1	45.3	48.3	43.3	49.0	52.5	55.5	43.8	50.3	56.1	55.0
Contract Construction	350.2	417.9	490.1	452.5	304.8	362.6	411.8	419.5	304.5	394.4	461.7	464.7
Manufacturing	3,629.4	3,619.0	3,738.6	3,836.0	3,289.6	3,389.7	3,540.8	3,935.9	4,019.6	4,324.1	4,270.9	4,814.9
Durable	3,043.3	3,016.7	3,100.5	3,189.2	2,705.6	2,787.4	2,903.7	3,246.5	3,348.7	3,614.1	3,529.4	4,023.9
Nondurable	586.1	602.3	638.0	646.8	583.9	602.3	637.2	689.3	670.9	710.1	741.5	791.0
Wholesale Trade	502.8	493.6	503.9	554.4	512.1	495.4	501.9	554.6	522.3	512.1	523.7	572.4
Retail Trade	767.7	819.1	857.6	878.6	813.8	831.3	878.1	932.8	878.7	937.4	970.2	1,028.0
Finance, Insur., Real Estate	302.6	307.4	314.4	341.8	324.8	329.6	330.7	360.8	345.2	353.8	367.4	394.6
Trans., Comm., Utilities	464.3	479.1	494.8	514.8	458.0	477.5	511.3	539.7	521.6	545.7	570.7	610.8
Services	987.3	1,038.2	1,079.1	1,144.4	1,081.1	1,121.5	1,155.7	1,255.1	1,208.5	1,285.0	1,315.8	1,413.3
Government	1,410.3	1,432.1	1,472.6	1,467.9	1,526.5	1,564.8	1,585.9	1,631.2	1,656.6	1,680.0	1,680.0	1,731.7
Federal Civilian	161.8	178.7	176.6	196.6	182.3	192.0	185.1	206.4	193.2	212.2	202.1	225.7
Federal Military	50.8	49.2	47.9	51.0	50.0	50.1	46.1	52.0	53.0	51.3	48.9	54.0
State and Local	1,197.7	1,204.1	1,248.1	1,220.3	1,294.2	1,322.8	1,354.7	1,372.8	1,410.3	1,416.4	1,429.0	1,452.0
Other Industries	12.8	12.8	13.0	13.0	13.8	13.8	14.0	14.3	15.5	16.3	16.5	17.3
Other Labor Income	828.8	847.9	882.8	906.3	905.0	933.5	971.9	1,049.3	1,123.0	1,191.6	1,208.5	1,310.9
Proprietors' Income	680.3	686.8	767.8	772.5	630.0	656.5	732.5	774.7	633.1	648.6	661.4	714.4
Farm	113.0	106.4	163.5	152.1	84.3	93.6	146.5	142.1	85.5	67.6	72.2	75.2
Nonfarm	567.3	580.4	604.3	620.4	545.7	562.9	588.0	632.7	547.6	581.0	589.2	639.2
Total Income by Place of Work	10,001.5	10,222.7	10,696.8	10,966.4	9,929.4	10,248.7	10,719.5	11,556.4	11,298.5	11,965.3	12,138.4	13,164.8
Less: Contributions for Soc. Ins.	549.6	574.5	491.4	456.2	562.4	588.1	503.3	467.0	633.3	661.9	566.2	525.6
Plus: Residence Adjustment	54.6	55.9	58.2	59.8	59.1	61.0	63.5	68.6	68.5	72.7	73.7	80.0
Net Income by Place of Residence	9,506.5	9,704.1	10,263.5	10,569.8	9,426.2	9,721.7	10,279.7	11,157.9	10,733.9	11,376.2	11,645.9	12,719.1
Plus: Dividends, Interest, Rent	1,372.5	1,347.0	1,510.0	1,531.5	1,539.0	1,566.0	1,597.8	1,627.5	1,674.8	1,727.3	1,780.5	1,840.0
Plus: Transfer Payments	1,397.2	1,492.3	1,498.3	1,557.7	1,939.1	1,973.6	1,962.6	1,947.0	2,042.2	2,034.1	2,009.8	2,017.9
Total Personal Income By Residence	$12,276.2	$12,643.4	$13,271.8	$13,659.1	$12,904.1	$13,261.1	$13,840.1	$14,732.6	$14,450.7	$15,137.5	$15,436.2	$16,577.2
Total Real Personal Income (1967 Dollars)	$ 8,560.8	$ 8,618.5	$ 8,789.3	$ 8,806.6	$ 8,245.5	$ 8,356.1	$ 8,553.8	$ 8,977.8	$ 8,710.5	$ 9,048.1	$ 9,074.8	$ 9,621.1

TABLE C-12 (Continued)
Quarterly Michigan Personal Income by Major Sources, 1974-1979
(Millions)

	1977				1978				1979			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Wage and Salary Disbursements	$10,796.2	$11,425.1	$11,842.7	$12,612.1	$12,243.0	$12,839.9	$13,235.3	$14,376.4	$14,085.6	$14,364.4	$14,265.9	$14,859.1
Farm	31.6	29.4	38.7	41.0	32.3	30.4	39.7	43.6	37.1	36.3	46.9	49.7
Mining	48.8	58.6	52.8	50.7	50.3	62.6	66.8	70.6	62.3	71.7	73.8	77.2
Contract Construction	345.6	468.9	567.5	574.0	450.3	568.7	687.4	694.2	522.0	643.6	755.5	743.3
Manufacturing	4,739.5	5,023.6	5,105.2	5,514.7	5,347.3	5,592.7	5,611.2	6,309.0	6,278.6	6,218.7	5,816.5	6,018.7
Durable	3,976.4	4,216.1	4,274.9	4,628.8	4,518.2	4,720.0	4,708.2	5,319.1	5,342.6	5,256.1	4,851.5	5,002.5
Nondurable	763.0	807.5	830.3	885.9	829.1	872.7	903.0	989.9	936.0	962.6	964.9	1,016.2
Wholesale Trade	553.4	564.8	594.4	646.9	646.0	653.2	687.1	764.9	750.3	756.0	779.3	850.4
Retail Trade	963.3	1,019.4	1,072.2	1,140.6	1,084.1	1,143.6	1,186.6	1,266.7	1,196.7	1,244.0	1,266.2	1,337.4
Finance, Insur., Real Estate	383.1	392.8	409.6	435.2	438.7	444.8	464.3	505.9	504.6	501.8	526.3	553.8
Trans., Comm., Utilities	568.7	605.3	651.5	680.6	662.0	703.0	727.2	772.5	757.6	779.9	804.9	854.1
Services	1,357.2	1,439.3	1,514.8	1,620.4	1,572.3	1,657.7	1,737.3	1,848.4	1,769.9	1,871.4	1,956.0	2,092.4
Government	1,789.0	1,805.3	1,816.8	1,887.7	1,940.2	1,961.0	2,004.3	2,076.6	2,182.6	2,216.0	2,214.6	2,255.4
Federal Civilian	206.8	220.8	218.3	250.8	223.4	244.1	237.6	271.0	247.2	261.3	250.1	277.4
Federal Military	53.4	52.6	44.7	50.6	48.6	48.3	46.9	51.4	50.6	49.3	46.7	51.6
State and Local	1,528.7	1,532.0	1,553.8	1,586.2	1,668.2	1,668.6	1,719.6	1,754.1	1,884.9	1,905.4	1,917.9	1,926.4
Other Industries	17.0	17.8	18.5	19.8	20.0	22.3	23.0	23.5	24.3	25.0	25.8	26.3
Other Labor Income	1,352.7	1,431.5	1,483.8	1,580.2	1,578.0	1,654.9	1,705.9	1,853.0	1,880.9	1,918.1	1,905.0	1,984.2
Proprietors' Income	709.2	739.5	778.3	879.6	841.1	870.7	936.9	1,015.8	1,004.1	1,047.6	1,083.7	1,140.8
Farm	82.5	76.2	90.8	147.5	111.4	105.4	148.1	159.0	155.8	182.4	224.5	245.9
Nonfarm	626.7	663.2	687.5	732.1	729.7	765.2	788.8	856.8	848.4	865.2	859.2	895.0
Total Income by Place of Work	12,858.0	13,595.8	14,104.7	15,072.3	14,662.0	15,365.4	15,878.1	17,245.3	16,970.5	17,330.0	17,254.7	17,984.3
Less: Contributions for Soc. Ins.	626.6	806.7	754.9	468.7	721.9	835.7	781.7	663.7	841.2	961.0	918.8	791.3
Plus: Residence Adjustment	81.4	86.2	89.3	95.1	94.0	98.6	101.6	110.4	109.4	111.6	110.8	115.4
Net Income by Place of Residence	12,312.8	12,875.3	13,439.1	14,698.5	14,034.0	14,628.3	15,196.0	16,691.8	16,238.7	16,480.6	16,446.8	17,308.4
Plus: Dividends, Interest, Rent	1,880.5	1,932.8	1,976.8	2,012.0	2,067.0	2,131.8	2,221.8	2,307.5	2,387.3	2,454.0	2,520.3	2,634.3
Plus: Transfer Payments	2,125.4	2,075.6	2,104.3	2,135.5	2,195.0	2,167.4	2,243.0	2,284.8	2,423.1	2,428.7	2,677.1	2,573.7
Total Personal Income By Residence	$16,318.5	$16,883.6	$17,520.1	$18,846.2	$18,296.0	$18,927.5	$19,662.8	$21,284.3	$21,049.1	$21,363.3	$21,644.2	$22,516.4
Total Real Personal Income (1967 Dollars)	$ 9,314.2	$ 9,390.2	$ 9,594.8	$10,242.5	$ 9,820.7	$ 9,842.7	$10,032.0	$10,552.4	$10,095.5	$ 9,973.5	$ 9,758.4	$ 9,764.3

Source: U.S. Department of Commerce, Bureau of Economic Analysis. Michigan Department of Management and Budget.

TABLE C-13
Personal Income and Real Per Capita Personal Income,
U.S. and Major Industrial States, 1976-1979

	Personal Income (millions)				Real Personal Income (millions of 1967 dollars)				Real Per Capita Personal Income (1967 dollars)			
	1976	1977	1978	1979	1976	1977	1978	1979	1976	1977	1978	1979
United States	$1,374,189	$1,523,861	$1,713,894	$1,930,742	$805,976	$839,593	$877,121	$888,106	$3,754	$3,880	$4,019	$4,035
Michigan	61,601	69,567	78,170	86,572	36,472	38,563	40,273	39,567	4,002	4,215	4,386	4,298
California	155,586	174,543	198,595	228,017	92,611	96,861	103,006	106,451	4,303	4,426	4,616	4,690
Florida	50,904	57,060	65,865	75,713	29,856	31,438	33,708	34,827	3,574	3,713	3,892	3,931
Illinois	81,798	90,371	99,877	110,032	49,545	51,464	52,374	51,273	4,426	4,584	4,660	4,566
Indiana	33,206	37,131	41,487	46,279	19,813	20,755	21,232	21,113	3,729	3,879	3,941	3,910
Massachusetts	38,164	41,603	45,894	51,303	21,870	22,684	25,024	24,097	3,777	3,926	4,336	4,177
New Jersey	53,623	58,163	64,322	71,461	30,416	31,355	32,801	33,534	4,134	4,273	4,483	4,574
New York	124,988	133,281	145,370	160,662	72,039	72,593	74,702	75,713	3,990	4,048	4,210	4,290
Ohio	68,539	75,847	84,092	93,517	40,412	41,835	44,718	42,182	3,780	3,911	4,168	3,931
Pennsylvania	75,579	82,212	90,206	100,398	44,354	45,246	46,283	46,588	3,758	3,835	3,935	3,971
Texas	77,796	88,461	101,460	117,585	45,099	47,765	50,452	51,754	3,580	3,730	3,867	3,868
Wisconsin	28,061	31,685	35,382	40,043	16,793	17,811	18,467	18,301	3,643	3,835	3,943	3,878

Source: Compiled by the Michigan Department of Management and Budget based on data from the U.S. Department of Commerce, Bureau of Economic Analysis, and the U.S. Department of Labor, Bureau of Labor Statistics.

TABLE C-14
U.S. Consumer Price Index - All Urban Consumers, 1980
(1967=100)

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual Average 1980	Percent Change 1979-80
ALL ITEMS	233.2	236.4	239.8	242.5	244.9	247.6	247.8	249.4	251.7	253.9	256.2	258.4	246.8	13.5
FOOD AND BEVERAGES	237.5	238.6	241.0	242.8	244.1	245.7	248.3	252.0	254.2	255.5	257.4	259.3	248.0	8.5
Food	243.8	244.9	247.3	249.1	250.4	252.0	254.8	258.7	261.1	262.4	264.5	266.4	254.6	8.6
Food at home	240.6	241.3	243.6	245.3	246.5	248.0	251.5	256.3	258.9	260.0	262.1	263.9	251.5	8.0
Cereals and bakery prod.	234.2	236.8	238.6	242.0	244.5	245.9	247.8	249.2	250.3	253.7	255.8	258.5	246.4	11.9
Meats,pltry,fish,eggs	238.0	236.2	237.8	235.1	231.5	231.2	236.7	245.4	251.8	252.6	254.9	255.7	242.2	3.4
Dairy products	218.4	219.5	220.3	222.4	226.2	227.2	228.6	229.7	230.6	232.7	235.4	238.0	227.4	9.8
Fruits and vegetables	229.8	228.3	232.4	240.9	246.6	250.1	253.9	258.4	257.4	254.2	253.3	255.6	246.7	7.3
Food away from home	256.1	258.3	260.9	263.0	264.6	266.6	267.8	269.5	271.4	273.1	275.3	277.7	267.0	9.9
Alcoholic beverages	179.3	180.4	181.7	183.9	185.4	186.4	187.2	188.7	189.6	190.4	190.9	191.6	186.3	8.1
HOUSING	247.3	250.5	254.5	257.9	261.7	266.7	265.1	265.8	267.7	271.1	273.8	276.9	263.3	15.7
Shelter	264.0	267.2	271.6	276.0	280.2	286.3	282.9	283.3	285.3	290.4	294.7	298.5	281.7	17.5
Rent, residential	184.1	185.6	186.6	187.0	188.9	191.1	192.1	193.2	195.1	197.1	198.3	199.6	191.6	8.9
Other rental costs	251.1	255.7	258.6	260.7	261.9	264.2	265.7	267.5	268.9	268.8	268.3	267.7	263.3	12.6
Homeownership	292.5	296.3	302.0	307.7	312.9	320.4	315.4	315.4	317.6	323.8	329.4	334.2	314.0	19.7
Fuel & other utilities	258.6	263.8	268.0	270.5	275.9	282.2	285.5	286.8	288.2	287.6	285.7	289.9	278.6	16.4
Fuels	318.0	327.1	333.9	337.8	346.4	355.8	360.8	362.5	364.5	362.8	358.7	364.7	349.4	22.0
Oil, coal & bottled gas	514.0	539.1	553.4	556.4	556.0	558.7	560.4	561.5	561.5	558.7	567.0	585.3	556.0	37.9
Gas(piped)& electricity	273.0	278.8	284.0	288.0	298.2	308.8	314.3	316.1	318.4	317.1	310.5	313.9	301.8	17.1
Hsehld. furnish & oper.	196.9	199.0	201.3	203.0	204.2	205.5	206.2	207.2	209.2	210.1	211.0	211.6	205.4	7.9
APPAREL AND UPKEEP	171.0	171.9	176.0	177.3	177.5	177.2	176.2	178.6	182.2	183.9	184.8	183.9	178.4	7.1
Apparel commodities	164.3	165.1	169.2	170.2	170.1	169.7	168.5	171.0	174.9	176.4	177.2	176.0	171.1	6.2
Men's and boys'	162.8	162.7	165.6	166.9	168.0	166.8	165.9	167.9	171.7	173.9	174.8	174.3	168.4	4.7
Women's and girls'	151.5	151.1	155.5	155.9	154.1	153.0	150.6	153.7	159.0	159.7	159.9	157.4	155.1	2.1
Infants' and toddlers'	224.9	226.6	231.4	234.3	237.4	240.9	243.0	243.9	242.4	244.1	248.9	250.1	239.0	8.2
Footwear	183.7	184.6	187.0	188.3	189.3	189.0	189.5	190.3	193.2	196.1	196.5	196.6	190.3	7.7
TRANSPORTATION	233.5	239.6	243.7	246.8	249.0	249.7	251.0	252.7	254.7	256.1	259.0	261.1	249.7	17.8
Private	233.5	239.8	244.0	247.0	249.2	249.7	250.5	251.6	253.2	254.5	257.4	259.4	249.2	17.4
Public	226.8	229.5	232.1	235.9	239.5	242.2	250.5	261.5	271.0	273.6	277.0	280.1	251.6	25.6
MEDICAL CARE	253.9	257.9	260.2	262.0	263.4	264.7	266.6	268.4	270.6	272.8	274.5	275.8	265.9	10.9
ENTERTAINMENT	195.3	197.8	200.6	202.5	204.0	205.3	206.6	208.0	209.8	210.9	211.2	212.0	205.3	8.9
OTHER GOODS & SERVICES	206.3	208.1	208.9	209.8	211.2	212.5	213.5	214.5	220.6	221.5	222.8	224.6	214.5	9.0
Commodities	222.4	225.2	228.0	229.9	231.4	232.8	234.1	236.7	239.0	240.7	242.5	243.8	233.9	12.2
Commodities less food	210.4	213.8	216.7	218.6	220.2	221.4	222.2	224.2	226.2	228.3	230.0	231.0	222.0	13.8

Source: U.S. Department of Labor, Bureau of Labor Statistics.

TABLE C-18
New Incorporations in Michigan, 1955-1980

Year	Profit	Non-Profit	Foreign (out of state)	Total
1955	4,619	1,094	379	6,092
1956	4,337	1,196	389	5,922
1957	3,842	1,391	461	5,694
1958	3,900	1,272	404	5,576
1959	4,812	1,209	527	6,548
1960	4,800	1,261	499	6,560
1961	4,788	1,312	497	6,597
1962	5,135	1,243	601	6,979
1963	5,102	1,241	528	6,871
1964	5,825	1,256	593	7,674
1965	6,152	1,286	627	8,065
1966	6,315	1,356	640	8,311
1967	6,341	1,361	715	8,417
1968	7,700	1,588	825	10,113
1969	9,586	1,767	1,064	12,417
1970	8,378	1,782	1,054	11,214
1971	8,270	1,993	1,082	11,345
1972	9,202	2,134	1,175	12,511
1973	9,709	1,878	1,093	12,680
1974	9,342	2,106	1,009	12,457
1975	9,996	2,138	926	13,060
1976	11,545	2,080	972	14,597
1977	13,273	2,082	956	16,311
1978	14,538	2,148	1,039	17,725
1979	18,654	2,217	1,062	21,933
1980	16,931	2,503	1,077	20,511

Source: Michigan Department of Commerce, Corporation Division.

TABLE C-20
Interest Rates, U.S., 1960-1980
(Percent per annum)

Period	U.S. Government Security Yields: 3-month Treasury Bills[1]	U.S. Government Security Yields: 10 Year Issues	Commercial Paper (Prime, 4-6 months)	High-Grade Municipal Bonds (Standard & Poor's)	Corporate Bonds (Moody's Aaa)
1960	2.928	NA	3.85	3.73	4.41
1961	2.378	NA	2.97	3.46	4.35
1962	2.778	NA	3.26	3.18	4.33
1963	3.157	NA	3.55	3.23	4.26
1964	3.549	NA	3.97	3.22	4.40
1965	3.954	NA	4.38	3.27	4.49
1966	4.881	NA	5.55	3.82	5.13
1967	4.321	NA	5.10	3.98	5.51
1968	5.339	NA	5.90	4.51	6.18
1969	6.677	NA	7.83	5.81	7.03
1970	6.458	NA	7.72	6.51	8.04
1971	4.348	NA	5.11	5.70	7.39
1972	4.071	6.21	4.69	5.27	7.21
1973	7.041	6.84	8.15	5.18	7.44
1974	7.886	7.99	9.84	6.09	8.57
1975	5.838	7.61	6.32	6.89	8.83
1976	4.989	7.42	5.35	6.49	8.43
1977	5.265	8.41	5.60	5.56	8.02
1978	7.221	9.44	7.99	5.90	8.73
1979	10.041	10.65	10.91[2]	6.39	9.63
1980	11.580	11.48	12.39	8.50	11.94

[1]Rate on new issues within period.

[2]Beginning November 1, 1979, data are for 6 months paper.

Source: *Economic Indicators*, Council of Economic Advisors, selected issues.

TABLE C-15
Detroit Consumer Price Index - All Urban Consumers, 1980
(1967=100)

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual Average 1980	Percent Change 1979-80
ALL ITEMS	237.2	240.4	242.9	248.2	248.4	256.7	253.7	255.1	259.5	264.3	266.4	269.7	253.5	15.9
FOOD AND BEVERAGES	233.8	234.1	235.7	236.5	238.7	240.6	243.2	246.0	245.0	246.3	250.5	252.3	241.9	8.2
Food	237.1	237.4	239.0	239.6	241.7	243.7	246.5	249.3	248.2	249.6	254.1	255.9	245.2	8.3
Food at home	235.4	236.5	238.3	239.5	242.1	243.9	248.1	252.1	250.5	253.4	256.0	257.8	246.1	9.0
Cereals and bakery prod.	243.1	242.0	246.0	247.9	254.0	252.8	258.5	259.9	259.0	262.0	264.7	267.7	254.8	11.2
Meats,pltry,fish,eggs	232.5	230.3	231.4	230.1	225.7	224.9	232.2	239.8	240.9	244.7	246.8	246.8	235.5	4.2
Dairy products	232.0	233.6	236.5	237.8	244.1	246.6	248.0	247.0	242.5	242.4	246.5	250.8	242.3	9.5
Fruits and vegetables	204.5	206.1	208.8	209.3	223.5	228.5	230.9	231.7	226.5	226.9	225.7	226.5	220.6	8.9
Other foods at home	274.8	282.2	283.9	288.1	291.0	297.0	298.1	303.4	300.6	305.8	310.8	314.2	295.8	14.6
Food away from home	251.0	249.3	250.3	249.9	250.9	253.1	252.9	253.0	253.0	250.8	260.0	261.8	253.0	6.6
Alcoholic beverages	212.3	212.9	214.7	217.9	221.6	222.5	223.4	225.5	225.8	226.2	226.7	228.6	221.5	7.7
HOUSING	256.2	260.5	262.5	271.5	269.4	287.2	280.8	280.2	286.1	294.8	295.2	302.8	278.9	21.6
Shelter	282.7	287.9	287.6	302.0	296.5	320.8	310.6	310.3	318.6	330.3	329.6	340.1	309.8	26.3
Rent, residential	184.3	193.8	190.4	190.6	191.7	194.3	194.1	195.3	197.2	197.1	198.6	201.5	194.1	10.0
Other rental costs	231.7	242.8	241.4	241.5	241.9	243.0	244.4	244.8	245.0	245.0	238.1	239.2	241.6	17.6
Homeownership	302.2	306.5	306.7	324.1	317.2	346.0	333.8	333.1	342.9	357.0	356.1	368.2	332.8	28.5
Fuel & other utilities	259.5	264.6	275.9	272.4	281.1	294.9	297.2	293.0	293.8	298.5	302.5	308.2	286.8	14.9
Fuels	307.0	315.3	332.7	328.3	341.7	362.4	364.7	358.1	359.4	366.6	359.6	367.5	346.9	18.2
Oil, coal & bottled gas	531.1	566.3	576.7	580.7	580.7	580.8	580.8	580.8	584.7	584.6	591.6	609.4	579.0	36.9
Gas(piped)& electricity	280.9	286.4	304.3	299.1	313.8	336.4	338.9	331.8	332.7	340.6	332.3	339.0	319.7	15.3
Hsehld. furnish & oper.	180.7	182.1	185.0	186.0	187.4	189.0	188.3	188.9	191.0	193.2	194.6	195.2	188.5	7.9
APPAREL AND UPKEEP	147.0	148.0	154.2	157.6	156.7	153.9	154.5	155.4	160.0	159.8	161.9	158.7	155.6	5.1
Apparel commodities	137.9	138.9	145.4	149.0	148.1	145.0	145.1	146.2	149.5	150.4	152.6	149.2	146.4	4.3
Men's and boys'	145.5	140.4	147.8	156.5	151.0	143.9	146.9	146.0	150.8	156.8	155.4	152.6	149.5	-0.5
Women's and girls'	127.8	133.5	138.8	139.6	141.7	139.5	138.1	138.5	142.9	137.4	143.7	140.8	138.5	7.2
Footwear	152.6	152.1	156.9	159.7	160.1	162.1	161.4	163.1	164.5	170.5	171.5	165.9	161.7	6.0
TRANSPORTATION	229.8	234.1	237.9	242.0	244.9	246.8	242.9	248.2	254.0	257.7	262.2	261.4	246.8	17.5
Private	229.7	234.1	237.9	242.1	245.0	246.7	242.7	247.3	253.0	256.9	261.6	260.6	246.5	17.3
Public	229.7	234.2	234.9	236.9	239.7	247.0	248.4	268.3	277.7	275.6	274.6	280.2	253.9	22.5
MEDICAL CARE	290.1	290.8	292.1	294.9	295.2	296.2	298.9	297.3	300.8	303.8	306.0	306.2	297.7	8.5
ENTERTAINMENT	184.2	187.9	191.2	192.0	192.5	194.3	192.7	192.0	194.4	195.4	194.4	194.6	192.1	6.0
OTHER GOODS & SERVICES	203.7	205.1	205.3	206.0	207.7	208.7	209.3	210.9	217.2	216.1	217.0	217.7	210.4	7.1
Commodities	215.8	217.6	219.4	223.3	223.8	229.1	228.1	231.3	232.7	236.0	239.6	240.5	228.1	13.7
Commodities less food & bev.	203.8	206.2	208.0	212.8	212.8	219.2	216.9	220.1	222.4	226.3	229.6	230.2	217.4	15.9

Source: U.S. Department of Labor, Bureau of Labor Statistics.

TABLE C-16
Consumer Price Indexes, Annual Averages for U.S. and Detroit, 1967-1980

	1967		1968		1969		1970		1971		1972		1973	
	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit
All items	100.0	100.0	140.2	104.3	109.8	110.6	116.3	117.4	121.3	121.7	125.3	126.2	133.1	134.5
Food	100.0	100.0	103.6	103.1	108.9	108.9	114.9	115.2	118.4	117.3	123.5	122.9	141.4	143.6
Food at home	100.0	100.0	103.2	103.0	108.2	109.1	113.7	115.4	116.4	116.1	121.6	121.6	141.4	144.8
Cereals and bakery products	100.0	100.0	100.4	100.5	103.3	104.7	108.9	110.9	113.9	114.5	114.7	115.8	127.7	134.5
Meats, poultry, fish and eggs	100.0	100.0	102.2	102.8	110.3	113.5	116.5	121.1	116.9	119.1	128.0	131.2	160.4	166.5
Dairy products	100.0	100.0	103.3	104.8	106.7	108.5	111.8	113.6	115.3	113.4	117.1	114.7	127.9	127.5
Fruits and vegetables	100.0	100.0	107.9	104.9	109.3	106.1	113.4	110.9	119.1	114.9	125.0	118.4	142.5	135.6
Other foods at home	100.0	100.0	102.6	101.6	107.9	106.9	114.1	113.1	115.9	114.4	116.7	116.1	130.3	132.5
Food away from home	100.0	100.0	105.2	104.0	111.6	108.6	119.9	115.0	126.1	123.3	131.1	128.6	141.4	138.8
Housing	100.0	100.0	104.2	104.9	110.8	113.7	118.9	124.2	124.3	128.3	129.2	133.3	135.0	137.4
Shelter	100.0	100.0	104.8	106.2	113.3	118.7	123.6	133.2	128.8	137.3	134.4	143.1	140.7	147.4
Rent	100.0	100.0	102.4	103.3	105.7	107.1	110.1	111.5	115.2	116.6	119.0	120.4	124.2	124.4
Homeownership	100.0	100.0	105.7	106.8	116.0	121.0	128.5	137.6	133.7	141.4	140.1	147.7	146.7	152.1
Fuel and utilities	100.0	100.0	101.3	100.6	103.6	101.5	107.6	104.6	115.1	110.7	120.2	115.4	126.9	121.2
Fuel oil and coal	100.0	100.0	103.1	101.8	105.6	105.4	110.1	109.8	117.5	113.7	118.5	113.9	136.0	129.3
Gas and electricity	100.0	100.0	100.9	100.0	102.8	100.8	107.3	103.3	114.7	111.3	120.5	116.9	126.4	123.1
Hsehld. furnish. and oper.	100.0	100.0	104.4	103.5	109.0	106.3	113.4	109.4	118.1	112.6	121.0	115.1	124.9	117.3
Apparel and Upkeep	100.0	100.0	105.4	104.3	111.5	108.9	116.1	112.0	119.8	115.5	122.3	118.3	127.1	122.3
Men's and boys'	100.0	100.0	105.7	106.4	112.4	112.5	117.1	116.7	120.3	117.3	121.9	117.3	126.4	121.8
Women's and girls'	100.0	100.0	105.9	103.1	111.7	104.3	116.0	104.6	120.1	111.2	123.0	115.4	127.3	117.4
Footwear	100.0	100.0	105.3	103.6	111.8	111.2	117.7	118.5	121.5	120.7	124.9	124.8	130.2	132.6
Transportation	100.0	100.0	103.2	104.0	107.2	107.4	112.7	109.9	118.6	114.6	120.0	116.5	123.8	123.6
Private	100.0	100.0	103.0	103.4	106.5	106.6	111.1	108.5	116.1	111.8	117.5	113.9	121.5	121.3
Public	100.0	100.0	104.6	112.0	112.7	117.7	128.5	126.1	137.7	148.4	143.4	148.5	144.8	150.8
Medical Care	100.0	100.0	106.1	106.6	113.4	114.4	120.6	124.4	128.4	134.1	132.5	141.4	137.7	148.4

TABLE C-16 (Continued)
Consumer Price Indexes, Annual Averages for U.S. and Detroit, 1967-1980

	1974		1975		1976		1977		1978[1]		1979[1]		1980[1]	
	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit	U.S.	Detroit
All items	147.7	149.1	161.2	160.3	170.5	168.9	181.5	180.4	195.4	194.1	217.4	218.8	246.8	253.5
Food	161.7	164.1	175.4	171.6	180.8	176.5	192.2	186.0	211.4	205.5	234.5	226.5	254.6	245.2
Food at home	162.4	165.3	175.8	171.1	179.5	173.3	190.2	183.5	210.2	203.5	232.9	225.8	251.5	246.1
Cereals and bakery products	166.1	182.1	184.8	189.8	180.6	184.5	183.5	193.7	199.9	208.9	220.1	229.2	246.4	254.8
Meats, poultry, fish and eggs	163.9	167.4	178.0	172.2	179.4	172.4	178.4	171.9	204.3	196.9	234.2	225.9	242.2	235.5
Dairy products	151.9	154.9	156.6	158.8	169.3	167.3	173.9	173.9	185.6	188.9	207.1	221.2	227.4	242.3
Fruits and vegetables	165.8	158.9	171.0	157.4	175.4	158.9	191.6	171.0	212.9	192.3	230.0	202.6	246.7	220.6
Other foods at home	162.8	164.2	185.6	177.9	189.9	184.5	224.1	215.3	N.A.	244.2	N.A.	258.9	N.A.	295.8
Food away from home	159.4	159.2	174.3	174.1	186.1	186.4	200.3	199.2	218.4	218.7	242.9	237.4	267.0	253.0
Housing	150.6	151.0	166.7	163.8	177.2	173.2	189.6	184.6	202.8	196.7	227.6	229.4	263.3	278.9
Shelter	154.3	159.5	169.7	170.3	179.0	177.2	191.1	188.0	210.4	204.0	239.7	245.2	281.7	309.8
Rent	130.2	129.8	137.3	136.1	145.4	142.1	153.5	150.8	164.0	162.6	176.0	176.5	191.6	194.1
Homeownership	163.2	165.5	181.7	177.2	191.7	184.3	204.9	195.4	227.2	212.2	262.4	258.9	314.0	332.8
Fuel and utilities	150.2	142.3	167.8	161.6	182.7	182.8	202.2	205.7	216.0	224.4	239.3	249.6	278.6	286.8
Fuel oil and coal	214.6	208.7	235.3	226.7	250.8	248.6	283.4	285.7	298.3	305.3	403.1	423.0	556.0	579.0
Gas and electricity	145.8	144.4	169.6	171.7	188.9	197.7	213.4	223.0	232.6	247.0	257.8	277.3	301.8	319.7
Hsehld. furnish. and oper.	140.5	130.5	158.1	145.0	168.5	156.6	177.0	160.5	177.7	161.6	190.3	174.7	205.4	188.5
Apparel and Upkeep	136.2	132.4	142.3	137.9	147.6	142.0	154.2	146.7	159.6	148.1	166.6	148.1	178.4	155.6
Men's and boys'	136.4	135.7	142.2	144.5	147.2	151.5	154.0	154.3	157.3	152.1	160.8	150.2	168.4	149.5
Women's and girls'	134.9	123.2	138.2	126.5	141.9	128.1	146.4	130.9	149.3	133.1	151.9	129.2	155.1	138.5
Footwear	138.1	144.6	144.2	146.9	149.9	147.2	156.9	150.8	153.8	147.5	176.7	156.6	190.3	161.7
Transportation	137.7	138.7	150.6	149.1	165.5	160.2	177.3	174.7	185.5	184.9	212.0	210.0	249.7	246.8
Private	136.6	137.2	149.8	148.0	164.6	159.5	176.7	174.8	185.0	184.5	212.3	210.1	249.2	246.5
Public	148.0	156.1	158.6	160.8	174.2	168.6	182.4	172.6	188.7	192.8	200.3	207.3	251.6	253.9
Medical Care	150.5	162.8	168.6	187.4	184.7	209.1	202.4	234.8	219.4	251.8	239.7	274.5	265.9	297.7

[1]Due to revisions made in the U.S. and Detroit Consumer Price Indexes in 1978, some of the categories have been changed and are no longer comparable to categories published in previous years. Beginning in 1978, the indexes reflect the prices paid by all urban consumers.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

TABLE C-17
Consumer Price Index and Inflation Rates for U.S. and Detroit, 1941-1980

Year	U.S. Index	U.S. Percent Change	Detroit Index	Detroit Percent Change	Year	U.S. Index	U.S. Percent Change	Detroit Index	Detroit Percent Change
1941	44.1	5.0	44.6	6.4	1961	89.6	1.0	88.7	0.7
1942	48.8	10.7	49.5	11.0	1962	90.6	1.1	88.9	0.2
1943	51.8	6.1	52.1	5.3	1963	91.7	1.2	89.8	1.0
1944	52.7	1.7	52.9	1.5	1964	92.9	1.3	90.5	0.8
1945	53.9	2.3	54.3	2.6	1965	94.5	1.7	92.6	2.3
1946	58.5	8.5	59.2	9.0	1966	97.2	2.9	96.7	4.4
1947	66.9	14.4	67.4	13.8	1967	100.0	2.9	100.0	3.4
1948	72.1	7.8	72.7	7.9	1968	104.2	4.2	104.3	4.3
1949	71.4	-1.0	71.8	-1.2	1969	109.8	5.4	110.6	6.0
1950	72.1	1.0	73.0	1.7	1970	116.3	5.9	117.4	6.1
1951	77.8	7.9	78.8	7.9	1971	121.3	4.3	121.7	3.7
1952	79.5	2.2	80.7	2.4	1972	125.3	3.3	126.2	3.7
1953	80.1	0.8	82.0	1.6	1973	133.1	6.2	134.5	6.6
1954	80.5	0.5	82.3	0.4	1974	147.7	11.0	149.1	10.9
1955	80.2	-0.4	82.2	-0.1	1975	161.2	9.1	160.3	7.5
1956	81.4	1.5	83.8	1.9	1976	170.5	5.8	168.9	5.4
1957	84.3	3.6	86.2	2.9	1977	181.5	6.5	180.4	6.8
1958	86.6	2.7	87.5	1.5	1978	195.4	7.7	194.1	7.6
1959	87.3	0.8	87.4	-0.1	1979	217.4	11.3	218.8	12.7
1960	88.7	1.6	88.2	0.9	1980	246.8	13.5	253.5	15.9

Source: U.S. Department of Labor, Bureau of Labor Statistics.

TABLE C-19
Michigan Liquid Assets, 1970-1980
(Millions)

End of Year	Total	Demand Deposits[1]	Time Deposits[1]	Savings and Loan Shares	Credit Union Shares & Deposits
1970	$25,370.1	$ 7,092.3	$12,770.7	$ 4,193.4	$1,313.7
1971	28,743.7	7,841.7	14,413.3	5,001.7	1,487.0
1972	32,002.6	8,555.2	15,754.5	6,029.8	1,663.1
1973	34,991.7	9,127.5	17,210.3	6,747.8	1,906.1
1974	37,214.7	9,187.0	18,655.7	7,320.0	2,052.0
1975	39,987.8	9,116.7	19,950.6	8,625.5	2,295.0
1976	43,567.2	9,084.7	21,873.4	10,175.0	2,434.0
1977	48,881.0	10,143.9	24,137.0	11,761.8	2,838.3
1978	54,303.9	11,246.6	26,648.7	13,248.6	3,160.0
1979	58,025.3	10,951.3	29,098.7	14,444.3	3,531.0
1980[2]	61,267.0	10,500.0	31,000.0	15,937.0	3,830.0

[1]Individual, Partnerships and Corporate Deposits only.
[2]Preliminary.

Source: Federal Deposit Insurance Corporation, the Michigan Credit Union League, and the Federal Home Loan Bank of Indianapolis.

TABLE C-22
Motor Vehicle Registrations, 1956-1980
(Thousands)

Year	Michigan				U.S.	
	Automobiles	Trucks and Buses	Total	Percent Change in Total	Total Motor Vehicle Registrations[1]	Michigan as Percent of U.S.
1956	2,747	391	3,138	0.8	65,183	4.81
1957	2,823	390	3,213	2.4	67,125	4.79
1958	2,717	392	3,109	-3.2	68,297	4.55
1959	2,796	405	3,201	3.0	71,354	4.49
1960	2,893	413	3,306	3.3	73,869	4.48
1961	2,938	417	3,354	1.5	75,958	4.42
1962	3,026	429	3,455	3.0	79,173	4.36
1963	3,161	439	3,600	4.2	82,714	4.35
1964	3,294	465	3,759	4.4	86,301	4.36
1965	3,497	494	3,991	6.2	90,361	4.42
1966	3,516	508	4,024	0.8	93,962	4.28
1967	3,587	546	4,133	2.7	96,931	4.26
1968	3,734	583	4,317	4.5	100,885	4.28
1969	3,873	615	4,488	4.0	105,097	4.26
1970	3,918	651	4,569	1.8	198,375	4.22
1971	4,052	687	4,740	3.7	112,922	4.20
1972	4,265	745	5,010	5.7	118,506	4.23
1973	4,436	804	5,240	4.6	125,420	4.18
1974	4,536	865	5,401	3.1	129,938	4.16
1975	4,628	918	5,546	2.7	132,951	4.17
1976	4,726	975	5,701	2.8	138,549	4.11
1977	4,954	1,032	5,986	5.0	143,747	4.16
1978	5,124	1,121	6,245	4.3	148,778	4.20
1979	5,093	1,248	6,341	1.5	154,118	4.11
1980[2]	5,421	1,322	6,743	6.3	159,029	4.24

[1] This definition of motor vehicles includes only non-military automobiles, trucks, and buses.

[2] Estimate.

Source: *Motor Vehicle Facts and Figures*, Motor Vehicle Manufacturers of the U.S., Inc., selected issues.

TABLE C-25
U.S. Motor Vehicle Production, 1960-1980

	Passenger Cars	Trucks and Buses	Total Motor Vehicles
1960	6,703,108	1,202,011	7,905,119
1961	5,522,019	1,130,919	6,652,938
1962	6,943,334	1,253,977	8,197,311
1963	7,644,337	1,464,399	9,108,776
1964	7,745,492	1,562,368	9,307,860
1965	9,335,227	1,802,603	11,137,830
1966	8,604,712	1,791,587	10,396,299
1967	7,412,659	1,611,077	9,023,736
1968	8,848,620	1,971,790	10,820,410
1969	8,224,392	1,981,519	10,205,911
1970	6,549,058	1,732,799	8,281,857
1971	8,580,311	2,085,959	10,666,270
1972	8,828,205	2,482,503	11,310,708
1973	9,667,152	3,014,432	12,681,584
1974	7,324,504	2,746,538	10,071,042
1975	6,717,064	2,264,575	8,981,639
1976	8,497,660	2,999,703	11,497,363
1977	9,191,377	3,473,626	12,665,003
1978	9,176,635	3,722,567	12,899,202
1979	8,434,150	3,046,586	11,480,736
1980	6,375,516	1,632,826	8,008,342
1979: January	785,724	344,553	1,130,277
February	737,527	316,919	1,054,446
March	887,781	369,300	1,284,081
April	723,139	264,638	987,777
May	933,626	348,907	1,282,533
June	826,368	301,643	856,531
July	584,487	213,625	798,112
August	449,109	137,200	586,309
September	622,326	184,606	806,932
October	790,882	230,103	1,020,985
November	633,591	187,777	821,368
December	459,590	147,615	607,205
1980: January	528,801	167,552	696,353
February	616,581	174,940	791,521
March	638,350	157,033	795,383
April	576,037	133,613	709,650
May	524,612	114,203	638,815
June	532,177	102,791	634,968
July	415,350	92,036	507,386
August	312,635	83,322	395,957
September	531,912	132,459	664,371
October	669,511	183,153	852,664
November	558,556	150,408	708,964
December	469,725	142,673	612,398

Source: *Motor Vehicle Facts and Figures*, Motor Vehicle Manufacturers Association of the U.S. Inc., selected issues, 1980 figures supplied by Motor Vehicle Manufacturers Association of the U.S., Inc.

TABLE C-21
New Private Housing Units Authorized in Michigan SMSAs, 1975-1980

SMSA	1975	1976	1977	1978	1979	1980[1]
Ann Arbor	633	1,105	1,670	2,390	1,302	390
Battle Creek	654	961	845	781	831	735
Bay City	481	822	527	500	346	130
Detroit	13,004	18,214	24,672	26,409	20,050	9,637
Flint	1,485	1,861	3,282	3,277	2,281	1,243
Grand Rapids	3,427	3,811	4,563	5,832	4,123	2,626
Jackson	890	916	1,177	663	819	245
Kalamazoo-Portage	1,655	1,972	2,640	1,674	1,838	1,531
Lansing-East Lansing	1,865	2,509	3,800	3,455	3,986	2,200
Muskegon-Muskegon Heights	639	1,163	847	1,173	674	567
Saginaw	885	1,041	1,343	1,251	1,250	363

[1] Preliminary.

Source: "Housing Units Authorized by Building Permits and Public Contracts," *Construction Reports*, series C40, U.S. Department of Commerce, Bureau of the Census, 1975-1979.

TABLE C-23
New Passenger Car Sales in Michigan, 1963-1980[1]

Year	Number	Percent of U.S. Total	Year	Number	Percent of U.S. Total
1963	483,827	6.40	1972	646,146	6.57
1964	525,901	6.52	1973	664,505	6.62
1965	636,211	6.83	1974	513,129	5.89
1966	571,363	6.34	1975	496,476	6.01
1967	515,692	6.23	1976	606,979	6.22
1968	596,485	6.34	1977	664,122	6.18
1969	587,689	6.13	1978	669,700	6.12
1970	479,224	6.13	1979	611,443	6.68
1971	633,963	6.52	1980[2]	444,881	5.00

[1] Retail sales as measured by new car registrations.

[2] Estimate.

Source: *Automotive News*, Crain Automotive Group, Inc., selected issues. 1980 figure from R.L. Polk and Company. (Further reproduction of this number is prohibited.)

TABLE C-24
Passenger Car Assemblies, 1966-1980 Model Years, in Percent of Total by States

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
U.S. Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MICHIGAN	35.5	34.2	35.0	34.5	34.2	31.0	32.4	33.3	31.0	33.2	33.9	32.4	30.2	29.1	26.2
California	8.9	8.9	7.8	7.9	8.3	8.2	7.4	8.4	7.6	6.7	6.7	8.1	7.8	8.8	5.0
Delaware	4.3	4.7	4.8	4.5	6.1	4.5	4.6	4.4	3.8	3.5	4.9	4.0	5.6	5.4	6.3
Georgia	5.8	5.3	4.9	5.4	5.7	5.1	6.3	5.8	5.4	5.5	6.6	6.5	5.7	5.0	5.8
Illinois	3.0	4.3	4.5	4.5	3.3	5.8	4.8	4.4	4.0	4.6	3.5	4.5	5.0	5.6	5.8
Kansas	2.4	2.4	2.6	2.4	2.5	2.4	2.3	2.2	1.5	2.3	2.8	2.9	2.6	2.7	2.1
Kentucky	1.0	1.0	0.9	0.9	1.0	1.2	0.9	0.9	0.8	1.3	1.1	1.1	1.3	1.1	0.5
Maryland	2.3	2.1	2.4	2.3	2.7	1.9	2.2	2.3	2.9	3.3	3.1	2.6	2.4	2.6	2.0
Massachusetts	1.7	1.6	1.3	1.6	1.7	1.2	1.4	1.7	1.2	0.9	1.0	1.5	1.7	1.8	2.4
Minnesota	1.3	1.1	1.1	1.1	1.1	1.3	0.9	0.8	0.9	1.3	1.0	1.3	0.9	---	---
Missouri	10.2	9.3	10.1	10.5	11.2	11.2	9.8	10.1	11.2	9.8	9.2	11.1	11.9	11.1	8.2
New Jersey	6.9	7.0	5.6	5.6	5.5	6.7	7.1	6.3	6.5	6.5	6.8	6.6	6.1	6.5	7.1
New York	2.1	2.1	2.3	2.1	2.2	1.9	2.2	2.0	1.9	1.6	1.4	2.5	2.6	2.6	4.2
Ohio	4.9	6.7	7.2	7.5	6.4	8.8	9.6	9.0	10.8	10.4	8.7	7.3	9.8	8.9	9.5
Oklahoma	---	---	---	---	---	---	---	---	---	---	---	---	---	0.4	4.2
Pennsylvania	---	---	---	---	---	---	---	---	---	---	---	---	---	1.4	3.3
Texas	3.0	3.0	2.8	2.7	2.6	2.3	2.2	2.4	2.6	3.0	2.9	2.5	2.1	2.3	2.5
Virginia	0.9	0.7	0.9	0.7	0.8	0.6	0.5	0.5	0.3	---	---	---	---	---	---
Wisconsin	5.8	5.6	5.8	5.8	5.7	5.2	5.4	5.5	7.6	6.1	6.4	5.0	4.3	4.5	4.9

Source: *Ward's Automotive Reports*, Ward's Communications, Inc., selected issues.

TABLE C-26
U.S. Automobile Sales, Truck Sales, Inventories, and Stock, 1956-1980
(Thousands)

Year	U.S. Automobile Sales (Retail)	Domestic Nameplate Sales	Foreign Import Sales	Foreign Import Sales As Percent of U.S. Auto Sales	End of Year Inventory	U.S. Stock of Autos (Still in use)	Truck Retail Sales	U.S. Stock of Trucks
1956	6,007	5,909	98	1.6	512	49,804	927	9,544
1957	5,961	5,754	207	3.5	652	51,432	879	9,776
1958	4,575	4,204	371	8.1	544	52,492	731	10,057
1959	6,094	5,408	614	10.1	567	55,087	928	10,532
1960	6,637	6,139	498	7.5	841	57,103	925	10,803
1961	5,934	5,555	379	6.4	855	58,854	908	11,043
1962	7,093	6,752	341	4.8	841	60,920	1,068	11,463
1963	7,744	7,344	400	5.2	935	63,493	1,230	11,902
1964	8,098	7,614	484	6.0	923	66,051	1,452	12,445
1965	9,328	8,760	568	6.1	1,264	68,940	1,534	13,126
1966	9,024	8,373	651	7.2	1,309	71,264	1,614	14,357
1967	8,342	7,573	769	9.2	1,133	72,968	1,519	14,988
1968	9,638	8,607	1,031	10.7	1,467	75,385	1,805	15,685
1969	9,584	8,466	1,118	11.7	1,464	78,495	1,929	16,586
1970	8,383	7,116	1,267	15.1	1,220	80,448	1,746	17,688
1971	10,249	8,676	1,573	15.3	1,447	83,137	2,009	18,462
1972	10,944	9,322	1,622	14.8	1,310	86,439	2,531	19,773
1973	11,441	9,670	1,770	15.5	1,600	89,805	3,029	21,412
1974	8,867	7,451	1,395	16.0	1,655	92,608	2,587	23,312
1975	8,636	7,050	1,589	18.4	1,424	95,241	2,351	24,813
1976	10,100	8,607	1,493	14.8	1,465	97,818	3,044	26,560
1977	11,178	9,104	2,071	18.5	1,731	99,904	3,486	28,222
1978	11,308	9,308	2,000	17.7	1,729	102,957	3,914	30,565
1979	10,651	8,325	2,326	21.9	1,767	104,677	3,480	32,583
1980	8,973	6,578	2,395	26.7	1,448	N.A.	2,232	N.A.

Source: *Automotive News*, Crain Automotive Group, Inc., selected issues. *Motor Vehicle Facts and Figures*, Motor Vehicle Manufacturers Association of the U.S., Inc.

TABLE C-27
Average Employment, Earnings, and Hours in Motor Vehicles and Equipment Industries, Michigan and U.S., 1956-1980

Year	MICHIGAN Number Employed (Thousands)	MICHIGAN Average Weekly Earnings	MICHIGAN Average Weekly Hours	MICHIGAN Average Hourly Earnings	UNITED STATES Number Employed (Thousands)	UNITED STATES Average Weekly Earnings	UNITED STATES Average Weekly Hours	UNITED STATES Average Hourly Earnings	Michigan Motor Vehicle Employment as Percent of U.S. Motor Vehicle Employment
1956	411.7	$ 97.68	40.4	$2.42	792.5	$ 96.82	41.2	$2.35	51.9
1957	387.7	100.47	39.6	2.54	769.3	100.61	40.9	2.46	50.4
1958	288.5	103.04	38.9	2.67	606.5	101.24	39.7	2.55	47.6
1959	303.4	115.60	40.7	2.84	692.3	111.38	41.1	2.71	43.8
1960	311.2	119.96	41.0	2.93	724.1	115.21	41.0	2.81	43.0
1961	268.4	117.18	39.3	2.98	632.3	114.69	40.1	2.86	42.4
1962	299.2	134.02	43.4	3.09	691.7	127.67	42.7	2.99	43.3
1963	315.8	141.68	43.9	3.23	741.3	132.68	42.8	3.10	42.6
1964	329.3	147.98	44.5	3.33	752.9	138.03	43.0	3.21	43.7
1965	364.5	159.85	46.2	3.46	842.7	147.63	44.2	3.34	43.3
1966	381.9	157.19	43.7	3.60	861.6	147.23	42.8	3.44	44.3
1967	361.8	155.29	41.6	3.73	815.8	144.84	40.8	3.55	44.3
1968	382.8	131.75	45.2	2.91	873.7	168.09	43.1	3.90	43.8
1969	398.7	178.74	42.1	4.25	911.4	170.56	41.6	4.10	43.7
1970	333.6	178.30	39.9	4.47	797.3	170.07	40.3	4.22	41.8
1971	351.8	209.54	41.6	5.04	842.1	194.46	41.2	4.72	41.8
1972	367.7	240.05	43.9	5.47	860.9	219.22	42.9	5.11	42.7
1973	399.0	258.07	44.8	5.76	955.3	238.06	43.6	5.46	41.8
1974	364.3	258.10	41.0	6.29	890.8	239.54	40.6	5.90	40.7
1975	327.9	286.98	41.7	6.88	774.1	262.68	40.6	6.46	42.4
1976	355.7	338.70	44.7	7.58	850.6	305.30	43.0	7.10	41.8
1977	369.8	382.46	45.0	8.50	890.6	348.39	44.1	7.90	41.5
1978	389.0	397.47	44.4	8.95	997.2	368.48	43.3	8.51	39.0
1979	389.8	411.80	41.6	9.90	994.6	373.19	41.1	9.08	39.2
1980[1]	319.9	439.51	40.0	10.99	774.2	395.60	40.1	9.87	41.3

[1] Preliminary.

Source: U.S. Department of Labor and Michigan Employment Security Commission.

TABLE C-28
U.S. Automobile Price Indexes, Personal Consumption Expenditures and Installment Credit, 1956-1980

Year	Wholesale Price Index Motor Vehicles and Equipment	Consumer Price Index New Cars (1967=100)	Consumer Price Index Used Cars	Personal Consumption Expenditures Auto and Parts (billions)	Automobile Installment Credit (millions) Extended	Repaid	Total Consumer Credit-Auto Paper
1956	91.2	93.5	69.1	$ 15.8	$15,515	$14,555	$ 14,420
1957	95.1	98.4	77.4	17.2	16,465	15,545	15,340
1958	98.1	101.5	80.2	14.8	14,226	15,415	14,152
1959	100.3	105.9	89.5	18.9	17,779	15,579	16,420
1960	98.8	104.5	83.6	19.7	17,657	16,419	17,658
1961	98.6	104.5	86.9	17.8	16,029	16,552	17,135
1962	98.6	104.1	94.8	21.5	19,694	17,447	19,381
1963	97.8	103.5	96.0	24.4	22,126	19,254	22,254
1964	98.3	103.2	100.1	26.1	24,046	21,369	24,934
1965	98.5	100.9	99.4	30.0	27,227	23,543	28,619
1966	98.6	99.1	97.0	30.4	27,341	25,404	30,556
1967	100.0	100.0	100.0	30.1	26,667	26,499	30,724
1968	102.8	102.8	102.6	36.3	31,424	28,018	34,130
1969	104.8	104.4	103.1	38.7	32,354	29,882	36,602
1970	108.5	107.6	104.3	36.2	29,791	30,137	35,184
1971	114.7	112.0	110.2	45.4	34,873	31,393	38,664
1972	118.0	111.0	110.5	52.4	40,194	34,729	44,129
1973	119.2	111.1	117.6	57.1	46,453	39,452	51,130
1974	128.2	117.5	122.6	50.4	45,429	44,929	52,871
1975	144.6	127.6	146.4	55.8	51,413	48,406	55,879
1976	153.7	135.7	167.9	72.6	62,988	52,750	66,116
1977	163.7	142.9	182.8	85.0	72,888	59,652	79,352
1978	176.0	153.8	186.5	94.3	88,987	69,430	98,909
1979	190.4	166.0	201.0	95.5	91,847	79,293	110,681
1980	208.7	179.3	208.3	89.7	83,438[1]	82,947[1]	116,836

[1]Estimate.

Source: U.S. Department of Labor, Bureau of Labor Statistics; U.S. Department of Commerce, Bureau of Economic Analysis; and The Federal Reserve System, the Board of Governors.

TABLE C-29
Quarterly U.S. Motor Vehicle Production and Auto Sales, 1973-1980
(Thousands)

Year: Quarter	U.S. Auto Production	U.S. Truck and Bus Production	Total Motor Vehicle Production	Domestic Auto Sales	Import Auto Sales	Total U.S. Auto Sales
1973: I	2,710	814	3,524	2,473	465	2,938
II	2,708	811	3,519	2,742	508	3,250
III	1,898	658	2,556	2,247	424	2,671
IV	2,352	731	3,083	2,208	375	2,583
1974: I	1,787	747	2,534	1,772	365	2,137
II	2,059	741	2,800	2,167	338	2,505
III	1,663	601	2,264	1,949	391	2,340
IV	1,816	658	2,474	1,562	301	1,863
1975: I	1,299	482	1,781	1,522	410	1,932
II	1,833	588	2,421	1,739	432	2,171
III	1,663	575	2,238	1,761	443	2,204
IV	1,922	620	2,542	2,028	304	2,332
1976: I	2,172	731	2,903	2,054	328	2,382
II	2,423	843	3,266	2,410	379	2,789
III	1,727	728	2,455	1,997	420	2,417
IV	2,176	697	2,873	2,145	367	2,512
1977: I	2,337	863	2,873	2,163	454	2,617
II	2,615	909	3,524	2,575	622	3,197
III	1,932	843	2,775	2,114	555	2,669
IV	2,307	858	3,165	2,253	440	2,693
1978: I	2,268	865	3,133	2,056	485	2,541
II	2,659	1,008	3,667	2,776	562	3,338
III	1,851	853	2,704	2,177	540	2,717
IV	2,398	996	3,394	2,299	413	2,712
1979: I	2,411	1,031	3,442	2,173	553	2,726
II	2,483	915	3,398	2,262	682	2,944
III	1,656	535	2,191	1,993	578	2,571
IV	1,884	565	2,449	1,892	512	2,404
1980: I	1,784	500	2,283	1,848	663	2,511
II	1,634	351	1,983	1,550	590	2,140
III	1,260	309	1,568	1,515	613	2,128
IV	1,698	476	2,174	1,665	529	2,194

Source: Motor Vehicle Manufacturers Association of the U.S. *Automotive News*, Crain Automotive Group, Inc., selected issues.

TABLE C-30
Rate Changes Granted to Regulated Utilities in 1980

TELEPHONE COMPANIES	
Michigan Bell Telephone Co.	$155,210,000
Mid-Michigan Telephone Co.	1,609,400
Wolverine Telephone Co.	132,240
Springport Telephone Co.	68,062
Lennon Telephone Co.	29,784
Northern Telephone Co.	15,669
Twining Telephone Co.	10,011
Total	$157,075,166
ELECTRIC COMPANIES	
Detroit Edison Co. (Net)	$184,495,122
Consumers Power Co. (Net)	143,857,926
Upper Peninsula Power Co.	6,150,562
Wisconsin Electric Power Co.	2,440,704
Wolverine Electric Cooperative, Inc.	1,425,654
Edison Sault Electric Co.	744,855
Cherryland Rural Electric Cooperative	675,000
Indiana & Michigan Electric Co.	548,725
Wisconsin Public Service Corp.	523,295
Fruit Belt Electric Cooperative	469,000
Cloverland Electric Cooperative	453,994
Alger-Delta Co-op. Electric Assoc.	141,021
Miller's Hydroelectric Power Co.	14,349
Total	$341,940,207
GAS COMPANIES	
Michigan Consolidated Gas Co.	$ 21,864,000
Michigan Gas Utilities Co. (Net after refund)	4,614,000
Wisconsin Public Service Corporation	112,362
Consumers Power Co. (Customer refund)	(23,150,363)
Southeastern Michigan Gas Co. (Customer refund)	(982,452)
Total	$ 2,457,547
STEAM COMPANIES	
Detroit Edison Co.	$ 2,577,000
NET TOTAL INCREASES	$504,049,920

Source: Michigan Department of Commerce, Public Service Commission.

TABLE C-34
Michigan and U.S. Resident Population,
July 1, 1950 - April 1, 1980
(Thousands)

Year	Michigan Population	U.S. Population	Michigan as a percent of U.S.
1950	6,407	151,868	4.22
1951	6,497	153,982	4.22
1952	6,650	156,393	4.25
1953	6,822	158,956	4.29
1954	7,066	161,884	4.36
1955	7,285	165,069	4.41
1956	7,465	168,088	4.44
1957	7,569	171,187	4.42
1958	7,667	174,149	4.40
1959	7,767	177,135	4.38
1960	7,834	179,975	4.35
1961	7,893	182,973	4.32
1962	7,933	185,738	4.27
1963	8,058	188,438	4.28
1964	8,187	191,095	4.28
1965	8,357	193,460	4.32
1966	8,512	195,501	4.35
1967	8,630	197,374	4.37
1968	8,696	199,312	4.36
1969	8,781	201,306	4.36
1970	8,901	203,805	4.37
1971	8,965	206,219	4.35
1972	9,015	208,234	4.33
1973	9,060	209,859	4.32
1974	9,096	211,389	4.30
1975	9,092	213,051	4.27
1976	9,100	214,680	4.24
1977	9,138	216,400	4.22
1978	9,181	218,228	4.21
1979	9,207	220,099	4.18
1980[1]	9,258	226,054	4.09

[1] Revised preliminary count.

Sources: Current Population Reports, Series P-25, Nos. 304, 376, 380, 460, 468, Department of Commerce, Bureau of the Census. The figures for 1971 through 1979 were revised by U.S. Department of Commerce, Bureau of the Census.

TABLE C-31
Prices Received by Michigan Farmers, 1968-1980

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
						Market Year Averages							
Corn (per bushel)	$ 1.03	$ 1.14	$ 1.32	$ 1.03	$ 1.49	$ 2.52	$ 2.91	$ 2.35	$ 2.38	$ 1.93	$ 2.05	$ 2.38	$ 2.66
Wheat (per bushel)	1.07	1.20	1.40	1.34	1.67	4.30	3.64	3.10	2.87	2.12	3.01	3.61	3.78
Oats (per bushel)	.57	.59	.70	.71	.84	1.35	1.65	1.40	1.47	1.50	1.32	1.36	1.72
Soybeans (per bushel)	2.39	2.33	2.84	3.05	4.60	5.73	6.28	4.50	5.51	6.71	6.16	6.77	6.58
Dry Beans (per cwt.)	8.00	6.30	9.70	11.50	9.70	27.30	14.80	29.30	18.69	16.51	16.88	16.48	20.97
Potatoes (per cwt.)	2.22	2.71	2.72	2.47	3.66	6.13	4.15	6.03	5.23	5.76	4.64	4.82	6.42
All Hay baled (per ton)	22.50	22.00	22.50	28.50	29.50	31.00	39.00	43.50	46.68	52.67	54.42	40.83	36.08
						Calendar Year Averages							
Hogs (per cwt.)	$19.00	$22.40	$22.90	$17.90	$25.50	$39.50	$35.80	$49.04	$44.10	$40.80	$47.87	$42.83	$39.38
Beef Cattle (per cwt.)	20.70	24.20	25.80	26.40	30.50	40.20	34.60	33.37	33.28	33.06	45.57	60.29	55.68
Veal Calves (per cwt.)	28.30	32.00	37.60	40.30	49.70	62.40	46.50	30.20	34.68	38.92	62.61	94.12	82.10
Lambs (per cwt.)	24.40	27.20	27.20	26.60	29.50	36.60	38.70	42.82	46.89	51.78	62.30	66.49	62.62
All Milk wholesale (per cwt.)	5.51	5.58	5.81	5.96	6.17	7.18	8.20	8.57	9.85	9.66	10.49	12.08	13.17
Turkeys (per lb.)	.20	.22	.24	.24	.23	.36	.29	.30	.30	.35	.46	.46	.43
Eggs (per doz.)	.33	.37	.36	.27	.26	.50	.48	.46	.54	.49	.47	.50	.48
Wool (per lb.)	.35	.37	.37	.25	.29	.63	.37	.25	.47	.64	.65	.68	.70

Source: *Agricultural Prices*, U.S. Department of Agriculture, Crop Reporting Board. *Agriculture Across Michigan*, U.S. Department of Agriculture and Michigan Department of Agriculture.

TABLE C-32
Michigan Farm Income Components, 1965-1980
(Millions)

Year	Realized Gross Farm Income					Farm Production Expenses	Net Changes in Farm Inventories	Net Farm Income
	Cash Receipts From Farm Marketings	Government Payments	Non-Money Income	Other Farm Income	Total			
1965	$ 793.9	$53.3	$104.6	$ 9.1	$ 960.9	$ 683.7	$-33.9	$243.3
1966	876.9	62.2	104.8	9.3	1,053.2	728.6	-15.5	309.0
1967	850.2	56.0	108.6	10.2	1,025.0	768.7	-18.6	237.7
1968	849.1	65.3	110.0	10.3	1,034.7	789.9	1.0	245.8
1969	888.2	73.4	117.1	10.5	1,089.1	799.5	6.0	295.6
1970	910.1	65.7	114.8	10.2	1,100.8	847.8	20.9	273.9
1971	974.3	52.5	116.5	12.0	1,155.3	885.4	-27.9	242.0
1972	1,039.1	61.2	126.7	12.4	1,239.3	936.0	58.4	361.7
1973	1,500.1	38.9	151.1	15.2	1,705.3	1,112.6	-91.7	500.9
1974	1,651.8	10.4	172.7	18.4	1,853.5	1,355.9	64.2	561.7
1975	1,647.7	13.3	184.9	22.9	1,868.8	1,437.0	58.2	489.9
1976	1,723.9	7.3	199.7	25.1	1,955.9	1,554.6	-35.2	366.1
1977	1,823.7	21.2	246.1	28.6	2,119.6	1,662.0	14.6	397.0
1978	2,126.8	45.5	N.A.	N.A.	N.A.	1,836.0	N.A.	524.0
1979[1]	2,485.8	15.6	N.A.	N.A.	N.A.	2,075.8	N.A.	808.0
1980[1]	2,734.5	N.A.	N.A.	N.A.	N.A.	2,322.8	N.A.	760.0

[1] Estimate.

Source: U.S. Department of Agriculture, Economic Research Service.

TABLE C-33
Number of Farms, Average Size, and Land in Farms in Michigan, 1950-1981

Year	Number of Farms	Average Size (acres)	Land in Farms (acres)	Year	Number of Farms	Average Size (acres)	Land in Farms (acres)
1950	161,000	111	17,900,000	1966	95,000	146	13,900,000
1951	156,000	113	17,700,000	1967	92,000	148	13,600,000
1952	151,000	116	17,500,000	1968	89,000	149	13,300,000
1953	146,000	118	17,300,000	1969	86,000	150	12,900,000
1954	135,000	123	16,600,000	1970	84,000	151	12,700,000
1955	138,000	122	16,900,000	1971	82,000	152	12,500,000
1956	135,000	120	16,600,000	1972	81,000	152	12,300,000
1957	132,000	123	16,300,000	1973	78,000	154	12,000,000
1958	127,000	126	16,000,000	1974	76,000	154	11,700,000
1959	123,000	128	15,700,000	1975[1]	70,000	164	11,500,000
1960	118,000	131	15,400,000	1976	70,000	163	11,400,000
1961	114,000	132	15,100,000	1977	68,000	168	11,400,000
1962	110,000	135	14,800,000	1978	66,000	173	11,400,000
1963	106,000	138	14,600,000	1979	66,000	173	11,400,000
1964	102,000	141	14,400,000	1980	66,000	173	11,400,000
1965	98,000	144	14,100,000	1981	65,000	175	11,400,000

[1]Estimate revised based on 1978 Census of Agriculture.

Source: Michigan Department of Agriculture, based on U.S. Census of Agriculture.

Table C-35
Michigan Population by County, 1970-1980

	1980 Preliminary	1970 Census	Change 1970-80		Components of Change			
			Number	Percent	Birth[2]	Deaths[2]	Net Migration Number	Net Migration Percent
Michigan	9,258,344[1]	8,881,826	376,518	4.2	1,439,900	759,600	-303,800	-3.4
Alcona	9,719	7,113	2,606	36.6	1,019	1,140	2,727	38.3
Alger	9,220	8,568	652	7.6	1,318	1,030	364	4.3
Allegan	81,318	66,575	14,743	22.1	12,262	6,023	8,504	12.8
Alpena	32,238	30,708	1,530	5.0	4,884	2,705	-649	-2.1
Antrim	16,166	12,612	3,554	28.2	2,275	1,641	2,920	23.2
Arenac	14,752	11,149	3,603	32.3	2,060	1,413	2,956	26.5
Baraga	8,480	7,789	691	8.9	1,324	1,000	367	4.7
Barry	45,755	38,166	7,589	19.9	6,411	3,591	4,769	12.5
Bay	119,849	117,339	2,510	2.1	19,192	9,706	-6,976	-5.9
Benzie	11,165	8,593	2,572	29.9	1,425	1,218	2,365	27.5
Berrien	170,897	163,940	6,957	4.2	29,357	15,414	-6,986	-4.3
Branch	40,105	37,906	2,199	5.8	6,000	3,776	-25	-0.1
Calhoun	140,788	141,963	-1,175	-0.8	22,580	12,946	-10,809	-7.6
Cass	49,514	43,312	6,202	14.3	7,136	4,057	3,123	7.2
Charlevoix	19,892	16,541	3,351	20.3	2,912	1,852	2,291	13.9
Cheboygan	20,605	16,573	4,032	24.3	3,035	2,017	3,014	18.2
Chippewa	28,964	32,412	-3,448	-10.6	6,371	2,948	-6,872	-21.2
Clare	23,834	16,695	7,139	42.8	2,865	2,367	6,641	39.8
Clinton	55,715	48,492	7,223	14.9	8,176	3,240	2,287	4.7
Crawford	9,475	6,482	2,993	46.2	1,292	851	2,552	39.4
Delta	38,963	35,924	3,039	8.5	6,001	4,052	1,090	3.0
Dickinson	25,777	23,753	2,024	8.5	3,295	3,064	1,793	7.6
Eaton	88,177	68,892	19,285	28.0	11,304	5,063	13,044	18.9
Emmet	22,792	18,331	4,461	24.3	3,184	2,021	3,298	18.0
Genesee	450,343	445,589	4,754	1.1	78,075	32,652	-40,669	-9.1
Gladwin	19,830	13,471	6,359	47.2	2,383	1,749	5,725	42.5
Gogebic	19,617	20,676	-1,059	-5.1	2,507	3,032	-534	-2.6
Grand Traverse	54,698	39,175	15,523	39.6	7,427	3,903	11,999	30.6
Gratiot	40,425	39,246	1,179	3.0	6,764	3,563	-2,022	-5.2
Hillsdale	42,152	37,171	4,981	13.4	6,217	3,645	2,409	6.5
Houghton	37,839	34,652	3,187	9.2	5,030	4,760	2,917	8.4
Huron	36,422	34,083	2,339	6.9	5,614	4,102	827	2.3
Ingham	272,288	261,039	11,249	4.3	44,547	16,525	-16,773	-6.4

TABLE C-35 (Continued)
Michigan Population by County, 1970-1980

	1980 Preliminary	1970 Census	Change 1970-80		Components of Change			
			Number	Percent	Birth[2]	Deaths[2]	Net Migration Number	Net Migration Percent
Ionia	51,670	45,848	5,822	12.7	8,433	4,204	1,593	3.5
Iosco	28,273	24,905	3,368	13.5	5,497	2,569	440	1.8
Iron	13,607	13,813	-206	-1.5	1,532	2,106	368	2.7
Isabella	53,943	44,594	9,349	21.0	7,168	3,018	5,199	11.7
Jackson	151,324	143,274	8,050	5.6	22,543	12,686	-1,807	-1.3
Kalamazoo	211,921	201,550	10,371	5.2	30,132	13,903	-5,858	-2.9
Kalkaska	10,926	5,372	5,554	103.4	1,514	911	4,951	92.2
Kent	444,030	411,044	32,986	8.0	70,815	34,649	-3,180	-.8
Keweenaw	1,964	2,264	-300	-13.3	272	349	-223	-9.9
Lake	7,801	5,661	2,140	37.8	973	1,101	2,268	40.1
Lapeer	69,992	52,361	17,631	33.7	10,421	4,443	11,653	22.3
Leelanau	13,986	10,872	3,114	28.6	1,626	1,227	2,715	24.9
Lenawee	89,986	81,951	8,035	9.8	14,667	7,267	635	0.8
Livingston	100,260	58,967	41,293	70.0	11,569	4,989	34,713	58.9
Luce	6,659	6,789	-130	-1.9	1,021	735	-416	-6.1
Mackinac	10,193	9,660	533	5.5	1,454	1,145	224	2.3
Macomb	694,458	626,204	68,254	10.9	96,277	40,012	11,989	1.9
Manistee	22,992	20,393	2,599	12.7	2,902	2,627	2,324	11.4
Marquette	74,115	64,686	9,429	14.6	12,801	5,394	2,022	3.1
Mason	26,343	22,612	3,731	16.5	3,476	2,592	2,847	12.6
Mecosta	36,925	27,992	8,933	31.9	4,680	2,443	6,696	23.9
Menominee	26,224	24,587	1,637	6.7	3,526	2,812	923	3.8
Midland	73,672	63,769	9,903	15.5	11,236	4,002	2,669	4.2
Missaukee	9,997	7,126	2,871	40.3	1,435	888	2,324	32.6
Monroe	133,524	119,215	14,309	12.0	20,105	8,974	3,178	2.7
Montcalm	47,532	39,660	7,872	19.9	7,561	4,425	4,736	11.9
Montmorency	7,467	5,247	2,220	42.3	945	839	2,114	40.3
Muskegon	157,103	157,426	-323	-0.2	25,733	13,598	-12,458	-7.9
Newaygo	34,864	27,992	6,872	24.6	5,010	3,135	4,997	17.9
Oakland	1,013,473	907,871	105,602	11.6	137,100	65,284	33,786	3.7
Oceana	21,865	17,984	3,881	21.6	3,465	2,075	2,491	13.9
Ogemaw	16,439	11,903	4,536	38.1	2,114	1,838	4,260	35.8
Ontonagon	9,832	10,548	-716	-6.8	1,594	1,225	-1,085	-10.3
Osceola	18,879	14,838	4,041	27.2	2,904	1,863	3,000	20.2
Oscoda	6,843	4,726	2,117	44.8	758	781	2,140	45.3

TABLE C-36
U.S. Population by Region and State, 1970 and 1980

Region, Division, and State	1980 Census (preliminary counts)	1970 Census	Change 1970-80 Number	Change 1970-80 Percent
United States	226,504,825	203,302,031	23,202,794	11.4
Regions:				
Northeast	49,136,667	49,060,514	76,153	0.2
North Central	58,853,804	56,590,294	2,263,510	4.0
South	75,349,155	62,812,980	12,536,175	20.0
West	43,165,199	34,838,243	8,326,956	23.9
Northeast:				
New England	12,348,493	11,847,245	501,248	4.2
Middle Atlantic	36,788,174	37,213,269	-425,095	-1.1
North Central:				
East North Central	41,669,738	40,262,747	1,406,991	3.5
West North Central	17,184,066	16,327,547	856,519	5.2
South:				
South Atlantic	36,943,139	30,678,826	6,264,313	20.4
East South Central	14,662,882	12,808,077	1,854,805	14.5
West South Central	23,743,134	19,326,077	4,417,057	22.9
West:				
Mountain	11,368,330	8,289,901	3,078,429	37.1
Pacific	31,796,869	26,548,342	5,248,527	19.8
New England:				
Maine	1,124,660	993,722	130,938	13.2
New Hampshire	920,610	737,681	182,929	24.8
Vermont	511,456	444,732	66,724	15.0
Massachusetts	5,737,037	5,689,170	47,867	0.8
Rhode Island	947,154	949,723	-2,569	-0.3
Connecticut	3,107,576	3,032,217	75,359	2.5
Middle Atlantic:				
New York	17,557,288	18,241,391	-684,103	-3.8
New Jersey	7,364,158	7,171,112	193,046	2.7
Pennsylvania	11,866,728	11,800,766	65,962	0.6
East North Central:				
Ohio	10,797,419	10,657,423	139,996	1.3
Indiana	5,490,179	4,195,392	294,787	5.7
Illinois	11,418,461	11,110,285	308,176	2.8
Michigan	9,258,344	8,881,826	376,518	4.2
Wisconsin	4,705,335	4,417,821	287,514	6.5
West North Central:				
Minnesota	4,077,148	3,806,103	271,315	7.1
Iowa	2,913,387	2,825,368	107,284	3.1
Missouri	4,917,444	4,677,623	239,821	5.1
North Dakota	652,695	617,792	34,903	5.6
South Dakota	690,178	666,257	23,921	3.6
Nebraska	1,570,006	1,485,333	84,673	5.7
Kansas	2,363,208	2,249,071	114,137	5.1

TABLE C-36 (Continued)
U.S. Population by Region and State, 1970 and 1980

Region, Division, and State	1980 Census (preliminary counts)	1970 Census	Change 1970-80 Number	Change 1970-80 Percent
South Atlantic:				
Delaware	595,225	548,104	47,121	8.6
Maryland	4,216,446	3,923,897	292,549	7.5
District of Columbia	637,651	756,668	-119,017	-15.7
Virginia	5,346,279	4,651,448	694,831	14.9
West Virginia	1,949,644	1,744,237	205,407	11.8
North Carolina	5,874,429	5,084,411	790,018	15.5
South Carolina	3,119,208	2,590,713	528,495	20.4
Georgia	5,464,265	4,587,930	876,335	19.1
Florida	9,739,992	6,791,418	2,948,574	43.4
East South Central:				
Kentucky	3,661,433	3,220,711	440,722	13.7
Tennessee	4,590,750	3,926,018	664,732	16.9
Alabama	3,980,061	3,444,354	445,707	12.9
Mississippi	2,520,638	2,216,994	303,644	13.7
West South Central:				
Arkansas	2,285,513	1,923,322	362,191	18.8
Louisiana	4,203,972	3,644,637	559,335	15.3
Oklahoma	3,025,266	2,559,463	465,803	18.2
Texas	14,228,383	11,198,655	3,030,728	27.1
Mountain:				
Montana	786,690	694,409	92,281	13.3
Idaho	943,935	713,015	230,920	32.4
Wyoming	470,816	332,416	138,400	41.6
Colorado	2,888,834	2,209,596	679,238	30.7
New Mexico	1,299,968	1,017,055	282,913	27.8
Arizona	2,717,866	1,775,399	942,467	53.1
Utah	1,461,037	1,059,273	401,764	37.9
Nevada	799,184	488,738	310,446	63.5
Pacific:				
Washington	4,130,163	3,413,244	716,919	21.0
Oregon	2,632,663	2,091,533	541,130	25.9
California	23,668,562	19,971,069	3,697,493	18.5
Alaska	400,481	302,583	97,898	32.4
Hawaii	965,000	769,913	195,087	25.3

Source: U.S. Department of Commerce, Bureau of the Census, special release.

TABLE C-38
Assessed Value of Tangible Property, Tangible Property Tax Levies, and Average Tax Rate in Michigan, 1952-1980
(Thousands)

Year	Assessed Valuation	County Equalized Valuations	State Equalized Valuations	Tax Levy		Average Tax Rate	
				Amount	Percent Change[1]	Amount	Percent Change[1]
1952	$11,531,377	$12,293,598	$13,634,300	$ 409,289	9.1	$30.02	-7.9
1953	12,094,392	13,059,429	15,720,900	443,292	8.3	28.20	-6.1
1954	12,782,605	13,910,137	16,722,075	496,501	12.2	29.69	5.3
1955	13,481,826	15,505,027	17,551,275	563,871	13.5	32.13	8.2
1956	14,530,579	17,044,209	18,957,624	621,839	10.3	32.80	2.1
1957	15,452,973	18,511,832	21,602,319	710,464	14.1	32,89	0.3
1958	15,926,183	19,501,399	22,153,627	741,260	4.4	33.46	1.7
1959	16,126,254	19,883,366	22,438,384	786.649	6.2	35.06	4.8
1960	16,629,847	20,811,250	24,870,342	851,180	8.1	34.22	-2.4
1961	16,784,842	22,422,661	25,202,552	874,775	2.8	34.71	1.4
1962	16,984,435	22,802,732	25,182,559	891,307	1.8	35.39	2.0
1963	17,190,129	23,211,055	25,797,485	934,869	4.9	36.24	2.4
1964	17,694,863	24,053,734	26,350,184	991,234	6.0	37.62	3.8
1965	18,370,770	24,743,771	27,080,518	1,038,623	4.8	38.35	1.9
1966	20,483,070	27,905,044	28,206,349	1,129,224	8.7	40.03	4.4
1967	24,260,128	29,807,504	29,891,295	1,288,682	14.1	43.11	7.7
1968	27,702,241	32,012,879	32,041,173	1,474,994	14.5	46.03	6.8
1969	30,079,712	35,083,860	35,101,273	1,660,861	12.6	47.32	2.8
1970	32,954,101	38,553,759	38,551,597	1,874,291	12.9	48.62	2.7
1971	36,593,349	41,562,933	41,648,959	2,063,280	10.1	49.54	1.9
1972	39,814,568	44,347,772	44,487,728	2,183,224	5.8	49,07	-0.9
1973	42,648,458	47,492,752	47,612,674	2,420,403	10.9	50.84	3.6
1974	47,269,245	51,747,552	51,871,329	2,649,594	9.5	51.08	0.5
1975	51,148,731	55,802,269	56,800,875	2,903,906	9.6	51.12	0.1
1976	49,905,386	54,232,820	55,478,935	2,960,724	2.0	53.37	4.4
1977	53,867,947	59,305,512	59,512,999	3,207,096	8.3	53.89	0.9
1978	58,353,692	64,724,020	64,863,929	3,484,874	8.7	53.73	-0.3
1979	64,169,123	72,449,469	72,527,956	3,890,996	11.7	53.64	-0.2
1980[2]	71,724,587	82,087,269	82,646,050	4,414,952	13.5	53.42	-0.4

[1]From previous year.

[2]Estimate.

Source: Michigan Department of Treasury, State Tax Commission.

TABLE C-35 (Continued)
Michigan Population by County, 1970-1980

	1980 Preliminary	1970 Census	Change 1970-80		Components of Change			
			Number	Percent	Birth[2]	Deaths[2]	Net Migration Number	Net Migration Percent
Otsego	14,983	10,422	4,561	43.8	2,208	1,067	3,420	32.8
Ottawa	156,975	128,181	28,794	22.5	23,238	9,103	14,614	11.4
Presque Isle	14,217	12,836	1,381	10.8	2,049	1,342	674	5.3
Roscommon	16,324	9,892	6,432	65.0	1,688	1,830	6,574	66.5
Saginaw	227,862	219,743	8,119	3.7	39,296	17,721	-13,456	-6.1
St. Clair	138,685	119,280	19,405	16.3	20,850	12,358	10,913	9.2
St. Joseph	55,917	47,392	8,525	18.0	8,850	4,943	4,618	9.7
Sanilac	40,729	35,181	5,548	15.8	6,072	4,081	3,557	10.1
Schoolcraft	8,574	8,226	348	4.2	1,301	1,114	161	2.0
Shiawassee	71,136	63,075	8,061	12.8	11,790	5,192	1,463	2.3
Tuscola	56,843	48,603	8,240	17.0	8,850	4,486	3,876	8.0
Van Buren	66,696	56,173	10,523	18.7	10,415	5,904	6,012	10.7
Washtenaw	261,405	234,103	27,302	11.7	37,708	13,048	2,642	1.8
Wayne	2,346,150	2,670,368	-324,218	-12.1	404,378	247,840	-480,756	-18.0
Wexford	24,992	19,717	5,275	26.8	3,684	2,368	3,959	20.1

[1]The first preliminary count for Michigan released by the Census Bureau was 9,236,891. The county populations in the Table are based on this preliminary count. However, to reflect the revised preliminary counts of 9,258,443, the difference between the two numbers is added to Wayne County where the first preliminary count was 2,346,249. The revised preliminary counts for counties and minor civil divisions will be available after April, 1981.

[2]The numbers of births and deaths are derived from the reported vital statistics released by the Michigan Department of Public Health between 1970 and 1979. Three quarters of the 1970 resident births and deaths are used as the period between April 1, 1970 through December 31, 1970. The 1980 resident births and deaths are derived from the extrapolation of the 1979 data by taking one quarter of 1979 births and deaths.

Source: U.S. Department of Commerce, Bureau of the Census.

TABLE C-37
Michigan School Enrollment Grades K-12, 1974-1985[1]

Year		Kinder-garten	Change From Last Period	Grades 1-6	Change From Last Period	Grades 7-9	Change From Last Period	Grades 10-12	Change From Last Period	Grades K-12	Change From Last Period
1973-74	Public	153,834	-5,310	944,929	-29,146	516,036	-2,485	473,912	2,145	2,088,701	-34,796
	Non-Public	5,842	677	114,744	-4,047	55,080	-699	38,609	-247	214,275	-4,316
	TOTAL	159,666	-4,633	1,059,673	-33,193	571,116	-3,184	512,521	1,898	2,302,976	-39,112
1974-75	Public	155,987	2,163	914,108	-30,821	512,494	-3,542	473,860	-52	2,056,449	-32,252
	Non-Public	6,871	1,029	109,379	-5,365	54,662	-418	38,654	45	209,566	-4,709
	TOTAL	162,858	3,192	1,023,487	-36,186	567,156	-3,960	512,514	-7	2,266,015	-36,961
1975-76	Public	159,981	3,994	884,786	-29,322	506,107	-6,387	475,334	1,474	2,026,208	-30,241
	Non-Public	8,825	1,934	107,936	-1,443	53,181	-1,481	38,750	96	208,692	-874
	TOTAL	168,806	5,948	992,722	-30,765	559,288	-7,868	514,084	1,570	2,234,900	-31,115
1976-77	Public	152,790	-7,191	866,756	-18,030	496,190	-9,917	473,452	-1,882	1,989,188	-37,020
	Non-Public	9,937	1,112	109,287	1,351	52,943	-238	38,686	-64	210,853	2,161
	TOTAL	162,727	-6,079	976,043	-16,679	549,133	-10,155	512,138	-1,946	2,200,041	-34,859
1977-78	Public	136,843	-15,947	852,650	-14,106	479,150	-17,040	460,862	-12,590	1,929,505	-59,683
	Non-Public	9,882	-55	108,107	-1,180	51,896	-1,047	38,795	109	208,680	-2,173
	TOTAL	146,725	-16,002	960,757	-15,286	531,046	-18,087	499,657	-12,481	2,138,185	-61,856
1978-79	Public	129,592	-7,251	832,229	-20,421	457,555	-21,595	450,435	-10,427	1,869,811	-59,694
	Non-Public	10,166	284	105,507	-2,600	49,558	-2,338	38,249	-546	203,480	-5,200
	TOTAL	139,758	-6,967	937,736	-23,021	507,113	-23,933	488,684	-10,973	2,073,291	-64,894
1979-80	Public	125,196	-4,396	808,981	-23,248	435,955	-21,600	434,526	-15,909	1,804,658	-65,153
	Non-Public	11,172	1,006	103,747	-1,760	48,244	-1,314	37,966	-283	201,129	-2,351
	TOTAL	136,368	-3,390	912,728	-25,008	484,199	-21,914	472,492	-16,192	2,005,787	-67,504
1980-81[2]	Public	122,319	-2,877	787,517	-21,464	420,352	-15,603	419,602	-14,924	1,749,791	-54,867
	Non-Public	11,549	377	103,015	-732	46,609	-1,635	37,341	-625	198,514	-2,555
	TOTAL	133,868	-2,500	890,532	-22,196	466,961	-17,238	456,943	-15,549	1,948,305	-57,482
1981-82[2]	Public	119,988	-2,331	762,856	-24,661	413,470	-6,882	400,908	-18,694	1,697,222	-52,569
	Non-Public	11,329	-220	102,801	-214	45,692	-917	36,267	-1,074	196,089	-2,425
	TOTAL	131,317	-2,551	865,657	-24,875	459,162	-7,799	437,175	-19,768	1,893,311	-54,994

TABLE C-37 (Continued)
Michigan School Enrollment Grades K-12, 1974-1985[1]

Year	Kinder-garten	Change From Last Period	Grades 1-6	Change From Last Period	Grades 7-9	Change From Last Period	Grades 10-12	Change From Last Period	Grades K-12	Change From Last Period
1982-83[2] Public	126,415	6,427	731,125	-31,731	415,529	2,059	383,661	-17,247	1,656,730	-40,492
Non-Public	11,936	607	101,116	-1,685	46,357	665	34,969	-1,298	194,378	-1,711
TOTAL	138,351	7,034	832,241	-33,416	461,886	2,724	418,630	-18,545	1,851,108	-42,203
1983-84[2] Public	126,768	353	709,912	-21,213	417,930	2,401	370,353	-13,308	1,624,963	-31,767
Non-Public	11,969	33	100,957	-159	46,806	449	33,768	-1,261	193,500	-878
TOTAL	138,737	386	810,869	-21,372	464,736	2,850	404,121	-14,509	1,818,463	-32,645
1984-85[2] Public	132,245	5,477	701,534	-8,378	407,051	-10,879	364,756	-5,597	1,605,586	-19,377
Non-Public	12,486	517	101,974	1,017	45,925	-881	33,092	-676	193,478	-22
TOTAL	144,731	5,994	803,508	-7,361	452,976	-11,760	397,848	-6,273	1,799,064	-19,399

[1] Excludes special education and part-time students.

[2] Projected enrollments are derived from Stanley E. Hecker and Frederick R. Ignatovich, *Michigan Total, Public, and Non-public Membership Projections*, Michigan State University, Department of Administration and Higher Education, July 14, 1980.

Source: Michigan Department of Education.

TABLE C-39
Michigan Valuation by Class for Real and Personal Property, 1965-1980[1]

Year	Real					
	Agriculture	Commercial	Industrial	Residential	Timber-Cut Over	Total
1965	$1,782,337,865	$ 3,207,827,756	$3,366,832,027	$12,345,526,028	$120,899,000	$20,823,422,676
1966	1,865,411,212	3,285,671,581	3,512,792,357	12,855,036,112	121,503,073	21,640,414,335
1967	1,948,819,877	3,387,509,107	3,579,844,740	13,768,088,054	121,466,492	22,805,728,270
1968	2,034,092,841	3,592,710,960	3,810,973,211	14,969,692,928	131,887,565	24,539,357,505
1969	2,259,750,633	3,895,805,295	4,026,509,087	16,769,575,874	142,832,730	27,094,473,619
1970	2,430,122,929	4,482,891,393	4,357,805,773	18,425,815,010	152,210,761	29,848,845,866
1971	2,631,643,039	4,920,726,264	4,732,051,343	20,121,981,797	166,389,114	32,572,791,557
1972	2,767,998,546	5,289,180,485	5,006,268,660	21,837,363,296	198,391,053	35,099,202,040
1973	2,966,596,460	6,095,838,694	5,257,318,114	23,132,331,200	230,441,780	37,682,526,248
1974	3,253,519,145	6,748,511,652	5,614,001,496	25,185,954,680	259,918,052	41,061,905,025
1975	3,680,674,772	7,251,964,454	5,824,753,617	27,679,961,125	289,724,453	44,727,078,421
1976	3,931,334,132	7,643,557,366	6,356,640,800	29,652,286,598	339,314,392	47,923,133,288
1977	4,410,266,132	8,077,760,508	6,585,112,846	32,150,563,868	381,970,088	51,605,673,442
1978	5,050,142,536	8,650,737,622	6,935,567,107	35,256,657,107	422,603,165	56,315,708,253
1979	5,766,430,668	9,581,045,520	7,502,276,607	39,954,252,345	466,549,835	63,270,554,975
1980	6,328,135,948	10,633,386,181	8,181,599,425	46,669,303,911	687,806,033	72,500,231,498

Year	Personal					
	Agriculture	Commercial	Industrial	Residential	Utility	Total
1965	$150,601,178	$1,279,989,787	$3,617,980,758	$28,343,190	$1,160,632,480	$ 6,237,547,393
1966	147,296,543	1,345,365,329	3,842,520,992	29,007,598	1,201,783,294	6,565,973,756
1967	1,018,373	1,490,963,980	4,262,523,175	27,726,088	1,299,049,485	7,081,281,101
1968	298,192	1,645,679,027	4,439,767,958	27,961,824	1,427,807,619	7,541,514,620
1969	134,764	1,786,309,802	4,670,662,761	37,587,110	1,612,062,552	8,106,756,989
1970	74,842	1,962,491,600	5,009,824,294	26,318,343	1,758,839,874	8,757,548,953
1971	94,686	2,060,693,881	5,128,931,506	27,807,650	1,847,296,876	9,064,824,595
1972	80,064	2,134,366,046	5,227,795,300	28,592,264	1,979,750,787	9,370,584,461
1973	128,156	2,328,516,373	5,417,026,545	32,384,384	2,143,642,638	9,921,698,096
1974	207,163	2,591,166,371	5,812,222,781	36,173,370	2,379,939,037	10,819,708,722
1975	204,494	2,844,516,638	6,551,055,713	39,285,910	2,652,494,463	12,087,557,218
1976	199,605	1,524,568,091	3,568,938,839	42,203,838	2,402,751,114	7,538,661,487
1977	261,790	1,621,573,625	3,702,836,647	44,002,603	2,528,988,905	7,897,663,570
1978	255,864	1,781,876,984	4,029,145,367	52,710,272	2,690,893,405	8,554,881,892
1979	279,328	1,971,939,226	4,304,285,432	54,087,484	2,926,809,276	9,257,400,746
1980	258,028	2,213,845,812	4,667,437,859	63,271,040	3,201,005,728	10,145,818,467

[1]Figures through 1970 represent 50 percent of true cash value. Figures from 1971 on represent state equalized value.

Source: Michigan Department of Treasury, State Tax Commission.

TABLE C-40
General Property Taxes by Local Unit of Government in Michigan, 1958-1979

Year	School		City		County		Township		Village		Total	
	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
1958	353,802.2	47.7	234,384.0	31.6	135,025.9	18.2	10,124.2	1.4	7,960.0	1.1	741,260.3	100.0
1959	389,000.3	49.5	242,136.3	30.8	137,105.3	17.4	11,002.3	1.4	7,405.2	.9	786,649.4	100.0
1960	434,146.0	51.0	250,634.4	29.4	146,079.6	17.2	12,840.1	1.5	7,479.5	.9	851,179.6	100.0
1961	451,447.4	51.6	253,717.6	29.0	148,592.5	17.0	13,910.8	1.6	7,107.0	.8	874,775.3	100.0
1962	465,724.7	52.3	254,522.7	28.6	149,178.6	16.7	14,697.9	1.6	7,183.0	.8	891,306.9	100.0
1963	498,052.4	53.3	260,411.0	27.8	153,274.8	16.4	15,773.4	1.7	7,357.4	.8	934,869.0	100.0
1964	534,370.4	53.9	265,713.7	26.8	166,548.3	16.8	16,978.0	1.7	7,623.8	.8	991,234.2	100.0
1965	571,091.1	55.0	269,558.3	26.0	172,293.6	16.6	19,024.5	1.8	6,655.5	.6	1,038,623.0	100.0
1966	636,209.7	56.3	282,974.0	25.1	181,355.7	16.1	21,743.5	1.9	6,941.4	.6	1,129,224.3	100.0
1967	750,348.5	58.2	314,664.2	24.4	189,037.4	14.7	26,793.6	2.1	7,838.3	.6	1,288,682.0	100.0
1968	898,866.9	60.9	339,445.3	23.0	199,504.7	13.5	28,703.2	2.0	8,474.1	.6	1,474,994.2	100.0
1969	1,032,700.1	62.2	368,264.1	22.2	216,840.8	13.1	33,868.7	2.0	9,187.6	.5	1,660,861.3	100.0
1970	1,167,313.3	62.3	417,562.7	22.3	240,246.9	12.8	38,954.4	2.1	10,214.2	.5	1,874,291.5	100.0
1971	1,293,298.2	62.7	455,499.5	22.1	259,503.5	12.6	43,820.7	2.1	11,158.2	.5	2,063,280.1	100.0
1972	1,367,523.3	62.6	478,665.4	21.9	276,349.4	12.7	47,966.9	2.2	12,719.4	.6	2,183,224.4	100.0
1973	1,543,161.8	63.8	515,281.2	21.3	294,461.2	12.1	53,656.6	2.2	13,841.8	.6	2,420,402.6	100.0
1974	1,725,399.0	65.1	525,884.2	19.8	319,716.8	12.1	62,529.7	2.4	16,064.2	.6	2,649,593.8	100.0
1975	1,899,787.4	65.4	564,565.6	19.4	347,099.5	12.0	74,693.5	2.6	17,759.6	.6	2,903,905.6	100.0
1976	1,951,535.5	65.9	571,117.9	19.3	341.809.9	11.5	78,555.2	2.7	17,705.1	.6	2,960,723.6	100.0
1977	2,141,067.6	66.8	586,803.2	18.3	369,748.3	11.5	90,448.4	2.8	19,028.3	.6	3,207,095.8	100.0
1978	2,342,118.9	67.2	620,979.0	17.8	400,217.0	11.5	100,893.4	2.9	20,665.5	.6	3,484,873.8	100.0
1979	2,622,639.0	67.4	677,378.3	17.4	447,480.4	11.5	118,691.2	3.1	23,189.3	.6	3,889,378.1	100.0

Source: Michigan Department of Treasury, State Tax Commission.

TABLE C-41
School Property Taxes in Michigan, 1958-1979
(Dollar Amounts in Thousands)

Year	Percent of Total Property Taxes	Operating			Debt and Building and Site			Total School Taxes		
		Amount	Percent of Total School Taxes	Millage Rate	Amount	Percent of Total School Taxes	Millage Rate	Amount	Percent of Total School Taxes	Millage Rate
1958	35.5	$ 263,285.6	74.4	11.88	$ 90,516.6	25.6	4.09	$ 353,802.2	100.0	15.97
1959	36.1	283,735.4	72.9	12.65	105,264.9	27.1	4.69	389,000.3	100.0	17.34
1960	37.9	322.184.3	74.2	12.96	111,961.7	25.8	4.50	434,146.0	100.0	17.46
1961	39.2	342,556.0	75.9	13.59	108,891.4	24.1	4.32	451,447.4	100.0	17.91
1962	40.8	363,570.0	78.1	14.44	102,154.7	21.9	4.05	465,724.7	100.0	18.49
1963	42.6	398,223.4	80.0	15.44	99,829.0	20.0	3.87	498,052.4	100.0	19.31
1964	43.8	433,945.3	81.2	16.47	100,425.1	18.8	3.81	534,370.4	100.0	20.28
1965	44.9	466,697.7	81.7	17.23	104,393.4	18.3	3.86	571,091.1	100.0	21.09
1966	46.4	524,235.6	82.4	18.59	111,974.1	17.6	3.97	636,209.7	100.0	22.56
1967[1]	48.8	629,330.8	83.9	21.05	121,017.7	16.1	4.05	750,348.5	100.0	25.10
1968	51.6	761,094.8	84.7	23.75	137,772.1	15.3	4.30	898,866.9	100.0	28,05
1969	52.2	868,152.4	84.1	24.73	164,547.7	15.9	4.69	1,032,700.1	100.0	29.42
1970	52.8	989,877.6	84.8	25.68	177,435.7	15.2	4.60	1,167,313.3	100.0	30.28
1971	53.3	1,101,358.7	85.2	26.44	191,939.5	14.8	4.61	1,293,298.2	100.0	31.05
1972	53.6	1,171,356.3	85.7	26.33	196,167.0	14.3	4.41	1,367,523.3	100.0	30.74
1973	54.4	1,317,419.4	85.4	27.67	225,742.4	14.6	4.74	1,543,161.8	100.0	32.41
1974	56.4	1,494,394.3	86.6	28.81	231,004.6	13.4	4.45	1,725,399.0	100.0	33.26
1975	57.3	1,663,951.6	87.6	29.30	235,835.8	12.4	4.15	1,899,787.4	100.0	33.45
1976	57.5	1,702,285.7	87.2	30.69	249,249.8	12.8	4.49	1,951,535.5	100.0	35.18
1977	66.8	1,891,472.6	88.3	31.78	249,595.0	11.7	4.20	2.141,067.6	100.0	35.98
1978	67.2	2,072,999.5	88.5	31.96	269,119.4	11.5	4.15	2,342,118.9	100.0	36.11
1979	67.4	2,339,301.7	89.2	32.25	283,337.3	10.8	3.90	2,622,639.0	100.0	36.15

[1]Estimated from expenditures prior to this year.

Source: Michigan Department of Treasury, State Tax Commission and Michigan Department of Education.

TABLE C-42
Students Enrolled in Public and Private Elementary, Secondary, and Higher Education in Michigan, 1965-1981

School Year	Elementary[1]		Secondary[2]		Total K-12			Percent Change		
	Public	Private	Public	Private	Public	Private	Public and Private	Public	Private	Public and Private
1964-65	1,134,309	228,293	783,542	140,902	1,917,851	369,195	2,287,046	3.3	2.9	1.0
1965-66	1,163,749	219,293	804,664	145,793	1,968,413	365,086	2,333,499	2.6	-1.1	2.0
1966-67	1,186,590	212,284	847,392	141,160	2,033,982	353,444	2,387,426	3.3	-3.2	2.3
1967-68	1,195,151	202,150	884,553	136,317	2,079,704	338,467	2,418,711	2.2	-4.2	1.3
1968-69	1,200,083	190,609	922,836	121,693	2,122,919	312,303	2,435,222	2.1	-7.7	0.7
1969-70	1,205,193	171,413	959,193	124,896	2,164,386	296,309	2,460,695	2.0	-5.2	1.0
1970-71	1,200,624	200,344	978,121	74,084	2,178,745	274,428	2,453,173	0.7	-7.4	-0.3
1971-72	1,201,522	127,043	1,010,983	96,793	2,212,505	223,836	2,436,341	1.5	-18.4	-0.7
1972-73	1,168,731	126,431	1,024,539	94,811	2,193,270	221,242	2,414,512	-0.9	-1.2	-0.9
1973-74	1,132,474	121,584	1,025,401	93,718	2,157,875	215,302	2,373,177	-1.6	-2.7	-1.7
1974-75	1,103,770	117,023	1,033,493	93,324	2,137,263	210,347	2,347,610	-1.0	-2.3	-1.1
1975-76	1,082,797	117,713	1,045,120	91,805	2,127,917	209,518	2,337,435	-0.4	-0.4	-0.4
1976-77	1,019,546	160,445	1,062,390	54,653	2,081,936	215,098	2,297,034	-2.2	2.7	-1.7
1977-78	989,493	117,989	1,035,673	93,951	2,025,166	211,940	2,237,106	-2.7	-1.5	-2.6
1978-79	1,003,355	116,213	962,802	87,846	1,966,157	204,059	2,170,216	-2.9	-3.7	-3.0
1979-80	979,492	122,539	931,842	86,261	1,911,334	208,800	2,120,134	-2.8	2.3	-2.3

School Year	Public Higher Education				Private Higher Education			
	Two-Year	Four-Year	Total	Percent Change	Total	Percent Change	Total Higher Education[3]	Percent Change
1964-65	46,123	143,114	189,237	13.2	43,472	7.0	232,709	12.0
1965-66	58,216	162,312	220,528	16.5	47,896	10.2	268,424	15.3
1966-67	69,496	176,487	245,983	11.5	49,462	3.3	295,445	10.1
1967-68	79,698	187,708	267,406	8.7	50,461	2.0	317,867	7.6
1968-69	95,965	198,419	294,384	10.1	50,777	0.6	345,161	8.6
1969-70	115,299	208,323	323,622	9.9	50,759	-0.0	374,381	8.5
1970-71	125,533	217,802	343,355	6.1	52,348	3.1	395,703	5.7
1971-72	132,059	220,165	352,224	2.6	52,928	1.1	405,152	2.3
1972-73	136,611	218,724	355,335	0.9	50,593	-4.4	405,928	0.2
1973-74	152,715	221,893	374,608	5.4	51,160	1.1	425,768	4.9
1974-75	173,643	229,627	403,270	7.7	55,273	8.0	458,543	7.7
1975-76	197,199	240,442	437,641	8.5	61,081	10.5	498,722	8.8
1976-77	187,622	236,831	424,453	-3.0	60,372	-1.2	484,825	-2.8
1977-78	186,876	236,618	423,494	-0.2	61,906	2.5	485,400	0.1
1978-79	187,649	236,035	423,684	0.1	62,810	1.5	486,494	0.2
1979-80	231,915	240,600	450,154	6.3	64,333	2.4	514,487	5.8
1980-81	244,971	242,999	487,970	8.4	66,216	2.9	554,186	7.7

[1]Includes grades K-6 and special education students.

[2]Includes grades 7-12 and part-time students.

[3]Headcount Basis.

Source: Michigan Department of Education and Michigan Department of Management and Budget.